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CTD TRANSECT OF THE KUROSHIO EXTENSION 28-41 DEG N, 152 DEG E, --ETC(U)
MAR 81 R T WILLIAMS N00014-79-C-0004
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This report presents CTD observations of temperature & salinity as a function of hydrostatic pressure in the Kuroshio Extension. The data was taken during the deployment of a ten element current meter array in the Kuroshio in July 1980. CTD lowerings were made from the surface to the ocean floor along a north-south section at 152°E, with 22 nearly equally spaced stations from 29°N-41°N. It is the first "eddy resolving" hydrographic section from the surface to the bottom in the Kuroshio Extension. The scientific objectives of this survey are to document the water masses presently in this area and compute the buoyancy frequency and geostrophic relative currents from the surface to the bottom.

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CTD TRANSECT OF THE KUROSHIO EXTENSION

28°N - 41°N, 152°E

JULY 1980

Data Report Prepared by
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TABLE OF CONTENTS

KUROSHIO EXTENSION ARRAY
28° - 41°N, 152°E
July 1980

This report presents CTD observations of temperature and salinity as a function of hydrostatic pressure in the Kuroshio Extension. The data was taken during the deployment of a ten element current meter array in the Kuroshio in July 1980. CTD lowerings were made from the surface to the ocean floor along a north-south section at 152°E, with twenty-two nearly equally spaced stations from 29°N -41°N. It is the first "eddy resolving" hydrographic section from the surface to the bottom in the Kuroshio Extension. The scientific objectives of this survey are to document the water masses presently in this area and compute the buoyancy frequency and geostrophic relative currents from the surface to the bottom. Identical sections will be made in May 1981 and in July 1982. The combined three sections of CTD data will be used with two year long records of currents from the moored array to describe the low-frequency variability of the Kuroshio transport and eddy field between July 1980 and July 1982.

P.P. Niiler
School of Oceanography
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February 1981

HYDROGRAPHIC DATA

The hydrographic data in this report were collected and processed by personnel of the Physical and Chemical Oceanographic Data Facility (PACODF), Scripps Institution of Oceanography. Continuous profiles of temperature, salinity, and oxygen were taken with a slightly modified Neil Brown Mark III CTD, manufactured by Neil Brown Instrument Systems of Falmouth, Massachusetts. Several rosette-mounted Niskin bottles were tripped during each cast to provide discrete temperature, salinity, and oxygen data for calibration purposes. Dissolved oxygen was not intentionally measured on this expedition, but as the CTD was equipped with an oxygen sensor, discrete bottle samples were taken and titrated for possible future calibration and use of the oxygen probe data.

The CTD pressure transducer is compensated for temperature effect in the analog circuitry. The pressure signal has been calibrated at several temperatures against an Ashcroft deadweight tester, the calibration of which is traceable to the National Bureau of Standards. The overall accuracy of the pressure signal is estimated to be ± 4 decibars with a precision of ± 2 decibars.

Temperatures at the check points were measured by deep sea reversing thermometers manufactured by Kahl Scientific Instrument Co. of El Cajon, California. These thermometers vary in precision from $\pm .01$ to $\pm .002$°C depending on the range of the thermometer, the narrow range low temperature thermometers being the more precise. The calibration of the thermometers is traceable to the PACODF platinum resistance standard which is checked frequently at low temperature against the triple point of water, employing at least two different triple point cells. The platinum standard is compared with the triple points of both water and diphenyl ether (26.8685 $\pm .002$°C) when calibrating thermometers to be used at warmer temperatures. The overall accuracy of the glass thermometers against which the CTD data is calibrated is estimated to be $\pm .003$-$.005$°C at low temperatures and $\pm .01$°C at temperature above 6°. The precision of the CTD temperatures is estimated to be $\pm .001$°C.

Typical check sample depths were 2-10 m, the oxygen minimum, the salinity minimum and three deeper samples, including one at the bottom. Salinity determinations were made on all water samples with a Plessey inductive laboratory salinometer.

Salinity calibrations were handled as follows: discrete salinities and uncorrected CTD salinities were plotted versus latitude. From this it was determined that a conductivity shift occurred at the bottom of station 6 cast 1. Stations 2 through 6 (down casts) had lower CTD salinity values at the bottom than stations 6 (up cast) through 27. Also the hydrographic salts for stations 2 through 5 were about .01°/oo higher than the rest of the cruise. These were salts from one salinometer run and are considered to be in error. Stations 6 (up cast) through 27 were calibrated to their hydrographic salts. Stations 2 through 6 were calibrated to bring them in line with the hydrographic values of the latter stations in the cruise. The estimated accuracy of the CTD salinity data is $\pm .006$.

Dissolved oxygen was determined by single titrations employing the Winkler method as revised by J. H. Carpenter (1965).

CTD DATA PROCESSING

Pressure, temperature, and conductivity are first converted from 16-bit integer values to engineering values. A "box car" filter is next applied which rejects conductivities less than 26 mmho/cm and temperatures outside the range -2 to 32°C. A gradient filter is then applied which rejects data where:

1. Pressure changes more than 3db/frame,
2. Temperature uncompensated for time response changes more than .5°C/frame,
3. Conductivity changes more than .5 mmho/cm/frame.

The conductivity response is matched to the temperature response with a lag filter of exponentially decreasing coefficients.

After calculation of salinity from pressure, temperature, and salinity a "box car" filter is applied to pressure and salinity, rejecting:

1. Pressures less than 0 db and greater than the maximum pressure of the casts,
2. Salinities outside the range of 32 °/oo to 38 °/oo.

The data is divided into 2.5 decibar blocks and averaged, then standard deviations are computed. The data is subjected to two passes through a standard deviation filter. On the first pass, temperature or salinity data exceeding $4\sigma + .004$ are rejected and the average and standard deviations are adjusted. On the second pass, temperature or salinity data exceeding $2\sigma + .004$ are rejected. The averages are adjusted for the rejected data and a final gradient filter is applied which rejects:

1. Shallower than 160 db, temperature changes greater than 1.5°C/db,
2. Deeper than 160 db, temperature changes greater than .18°C/db,
3. Shallower than 160 db, salinity changes greater than 1.500°/oo/db,
4. Deeper than 160 db, salinity changes greater than .180°/oo/db.

The data is then stored in the files and calibrated to the bottle data.

Variations in depths of isotherms and isohalines were observed frequently between down and up traces from the CTD. Therefore, the CTD data taken during lowering cannot be expected to agree in all cases with the Niskin data taken on the up trace, particularly in regions of large gradients.

The following table gives the means of the difference obtained by subtracting the corrected CTD data from the upper and lower Niskin bottle data, and the standard deviations of those differences.

	Temperature Degrees		Salinity Per Mil	
	Shallow	Deep	Shallow	Deep
Mean	-0.0475	-0.0004	0.0020	0.0004
Standard Deviation	0.0630	0.0011	0.0182	0.0063

Potential temperature, salinity, and several calculated parameters are tabulated in this report for each CTD cast at pressure intervals of 10 decibars. Individual station plots include potential temperature, salinity, and sigma theta versus depth, and potential temperature, salinity, and sigma theta versus depth, and potential temperature versus salinity. Niskin bottle salinities and reversing thermometer temperature from CTD check samples are overlaid on the CTD traces. Offset sequential station plots of potential temperature and salinity from 0 to 1600 meters and from 1500 to 6000 depth are also included to illustrate changes from station to station. The profiles for each station are offset by 5°C and 0.5°/oo from those of the previous station for shallow plots and 0.5°C and 0.05/oo for deep profiles.

APPENDIX A

1. Salinity - calculated from temperature, pressure, conductivity, and previous salinity.

```
      SUBROUTINE SALCQ(T,P,G,SP,S)
CC       SALCQ USED TO BE SALCP. SALCP IS NOW A ASM PROGRAM AND
CC     RESIDES IN THE EXECUTIVE
C     SOURCE.
C     WOODS HOLE OCEANOGRAPHIC INSTITUTION
C     TECHNICAL MEMORANDUM NO.4-71      MAY 1971
C     COMPUTER PROGRAM FOR REAL TIME DIGITAL ACQUISITION
C     CONDUCTIVITY, TEMPERATURE, AND PRESSURE.
C     AUTHORS: C.D. TOLLIUS, G.H. POWER, AND D.J. EKSTRAND
C
C     SALCP CALCULATES SALINITY FROM CONDUCTIVITY
C     PARAMETERS ARE TEMPERATURE,PRESSURE,CONDUCTIVITY,PREVIOUS SALINITY
C
      GO=42.909
      IF (P) 100,50,100
   50 RP=1.
      GO TO 200
  100 GT=1.5192-4.5302E-2*T+8.3089E-4*T*T -7.9E-6*T*T*T
      FP=1.042E-3*P-3.3913E-8*P*P +3.3E-13*P*P*P
      HP=4.E-4+2.577E-5*P-2.492E-9*P*P
      RJT=1.-.1535*T+8.276E-3*T*T-1.657E-4*T*T*T
      RLT=6.95E-3-7.6E-5*T
      RMS=35.-SP
      RP=1.+.01*(GT*FP+HP*RJT)*(1.+RLT*RMS)
  200 PT=.67652453+T*(.20131661E-1+T*(.99886585E-4+T*(-.19426015E-6+
     1     T*(-.67249142E-8)))      )
      RT=G/(GO*PT*RP)
      R=RT+(RT-1.)*(.0175*RT-.0045*RT*RT)
     1     *(-1.+.08*T-.00089 *T*T )
      S=-.73469+R*(32.28071+R*(3.4775-R*.02395))
      RETURN
      END
```

The above routine was developed for temperatures based on the 1948 International Practical Temperature Scale. The conversion from IPTS-68 to IPTS-48 is approximated in the calling routine by the expression $T_{48} = T_{68} + 4.4E\text{-}6 * T_{68} * (100 - T_{68})$.

2. Potential Temperature

```
      SUBROUTINE TPOT(PRESS,TEMP,SAL,POT)
C     THIS PROGRAM COMPUTES POTENTIAL TEMPERATURE FROM PRESSURE, TEMPERATURE
C     AND SALINITY.
C     PRESSURE DATA MUST BE IN DECIBARS
C     B. HELLAND-HANSEN, THE OCEAN WATERS. INTERN. REV. GES. HYDROBIOL.
C      HYDROGR., (1912), SUPPL. BD III, H. 2, 1-84.
      P=PRESS
      A=TEMP*(1.014E-5+TEMP*(-1.27E-7+TEMP*2.7E-9)    )
      B=SAL*(1.322E-6-TEMP *2.62E-8+SAL*4.1E-9)
      C=P*(9.14E-9+TEMP*(-2.77E-10+TEMP*9.5E-13)-P*1.557E-13)
      POT=TEMP-P*(-1.6E-5+A+B+C)
      RETURN
      END
```

3. Sigma Theta

```
      SUBROUTINE SIGMT(S,T,SIG)
C
C     PARAMETERS ARE SALINITY AND TEMPERATURE
C     SOURCE.
C     DEEP-SEA RESEARCH,1970,VOL. 17, PP 679 TO 689.
C     PERAMON PRESS.  PRINT IN GREAT BRITAIN.
C     THE SPECIFIC GRAVITY/SALINITY/TEMPERATURE RELATIONSHIP IN
C     NATURAL SEA WATER.
C     AUTHORS
C     R.A. COX, M.J. MCCARTNEY AND F. CULKIN.
C
C     SPECIFIC GRAVITY FROM SALINITY (PARTS PER MILLE) AND TEMPERATURE
C     (DEGREES C).
C
      IF(IXCH(S))30,30,20
   20 IF(IXCH(T))30,30,40
   30 SIG=2.2E-22
      GO TO 50
   40 SIG=8.00969062E-2  +5.88194023E-2*T
     1      +7.97018644E-1*S  -8.11465413E-3*T*T
     2      -3.25310441E-3*S*T  +1.31710842E-4*S*S
     3      +4.76600414E-5*T*T*T  +3.89187483E-5*S*T*T
     4      +2.87971530E-6*S*S*T  -6.11831499E-8*S*S*S
C
   50 RETURN
      END
```

4. Specific Volume

```
      FUNCTION ALPH2(SS,TT,PP)
C
C     ALPH2 CALCULATES SPECIFIC VOLUME
C     PARAMETERS ARE SALINITY,TEMPERATURE,PRESSURE
C (B) SIGMA ZERO AND T BY COX ET AL  1970  ALPHA (ALPH2) BY EKMAN EQN  1908
C     V. W. EKMAN, DIE ZUSAMMENDRUCKBARKEIT DES MEERWASSERS, PUBL. CIRC.
C      CONS. EXPLOR. MER, (1908), 43, 1-47.
C
      S=SS
      T=TT
      P=PP
      CALL SIGMT(S,0.,SIG)
      CALL SIGMT(S,T,SIGM)
      AL       =1.0/(1.0+1.E-3*SIGM     )
      ALPH2    =AL       -P*AL       *1.E-9*(4886.0/(1.0+1.83E-5*P)-(227.0+
     *  28.33*T-0.551*T*T+0.004*T*T*T)+P*1.E-4*(105.5+9.50*T-0.158*T*T)
     *-1.5*P*P*T*1.E-8-(SIG    -28.0)/10.0*(147.3-2.72*T+0.04*T*T-P*1.E-4
     *  *(32.4-0.87*T+ 0.02*T*T))+(SIG    -28.0)/10.0*(SIG    -28.0)/10.0
     *  *(4.5-0.1*T-P*1.E-4*(1.8-0.06*T)))
      RETURN
      END
```

5. Transport function - the integral of dynamic depth with respect to depth,

$$\int_0^Z \int_0^P \delta \, dp dZ$$

```
      SUBROUTINE TRNSP(#C,#T,PREIN,NUM)
      DIMENSION C(1),T(1)
C     C = VIRTUAL ARRAY CONTAINING DYNAMIC HEIGHT
C     T = VIRTUAL ARRAY TO STORE TRANSPORT
C     PREIN = PRESSURE INTERVAL
C     NUM = NUMBER OF RECORDS TO COMPUTE
      T(1)=0.0
      TLAST=0.0
      M=NUM-1
      DO 100 I=1,M
      T(I+1)=TLAST+(C(I+1)+C(I))/2.0*(DEEP(I*PREIN)-DEEP((I-1)*PREIN))
      TLAST=T(I+1)
  100 CONTINUE
      RETURN
      END
```

6. Sound Velocity

```
      FUNCTION CVEL(S,T,PP,CSTP)
C     TAKEN FROM V. A. DEL GROSSO - NAVAL RESEARCH LAB 1974
C     EQUATION KNOWN AS NRL II
C     STANDARD DEVIATION OF 0.05 M/SEC
C     T IS IN DEGREES CELSIUS
C     S IS IN PARTS PER THOUSAND
C     P IS IN KILOGRAMS PER SQUARE CENTIMETER GAUGE
C
C
C     CONVERT TO DECIBARS
      DATA CHECK/2.2E-22/
      IF(S.EQ.CHECK.OR.T.EQ.CHECK.OR.PP.EQ.CHECK)  GO TO 100
      P=PP*0.1019716
      C0=1402.392
      DELTACT=0.501109398873E+1*T -0.550946843172E-1*T**2
     *+ 0.221535969240E-3*T**3
      DELTACS= 0.132952290781E+1*S +0.128955756844E-3*S**2
      DELTACP=0.156059257041*P +0.24499868841E-4*P**2
     *-0.883923532513E-8*P**3
      DCSTP=-0.127562783426E-1*T*S +0.635191613389E-2*T*P
     *+ 0.265484716608E-7*T**2*P**2-0.159349479045E-5*T*P**2
     *+0.522116437235E-9*T*P**3 -0.438031096213E-6*T**3*P
     *-0.161674495909E-8*S**2*P**2 +0.968403156410E-4*T**2*S
     *+0.485639620015E-5*T*S**2*P -0.340597039004E-3*T*S*P
      CSTP=C0+DELTACT+DELTACS+DELTACP+DCSTP
      RETURN
  100 CSTP=CHECK
      RETURN
      END
```

7. Vaisala frequency (squared, X 10^6). The Vaisala frequency, N, is defined as:

$$N = -\left(\frac{g}{\rho}\frac{d\rho}{dZ} - \frac{g^2}{C^2}\right)^{\frac{1}{2}}$$

where g = gravitational acceleration,

ρ = <u>in situ</u> density,

Z = depth, and

C = sound velocity.

Assuming hydrostatic equilibrium, $dP = \rho g dZ$ and rearranging:

$$N^2 = g^2\left(\frac{d\rho}{dP} - \frac{1}{C^2}\right)$$

The interval over which the gradient of density with respect to pressure was calculated in this report is $\pm$10 decibars from the pressure at which the Vaisala frequency is reported.

Kuroshio Extension Array
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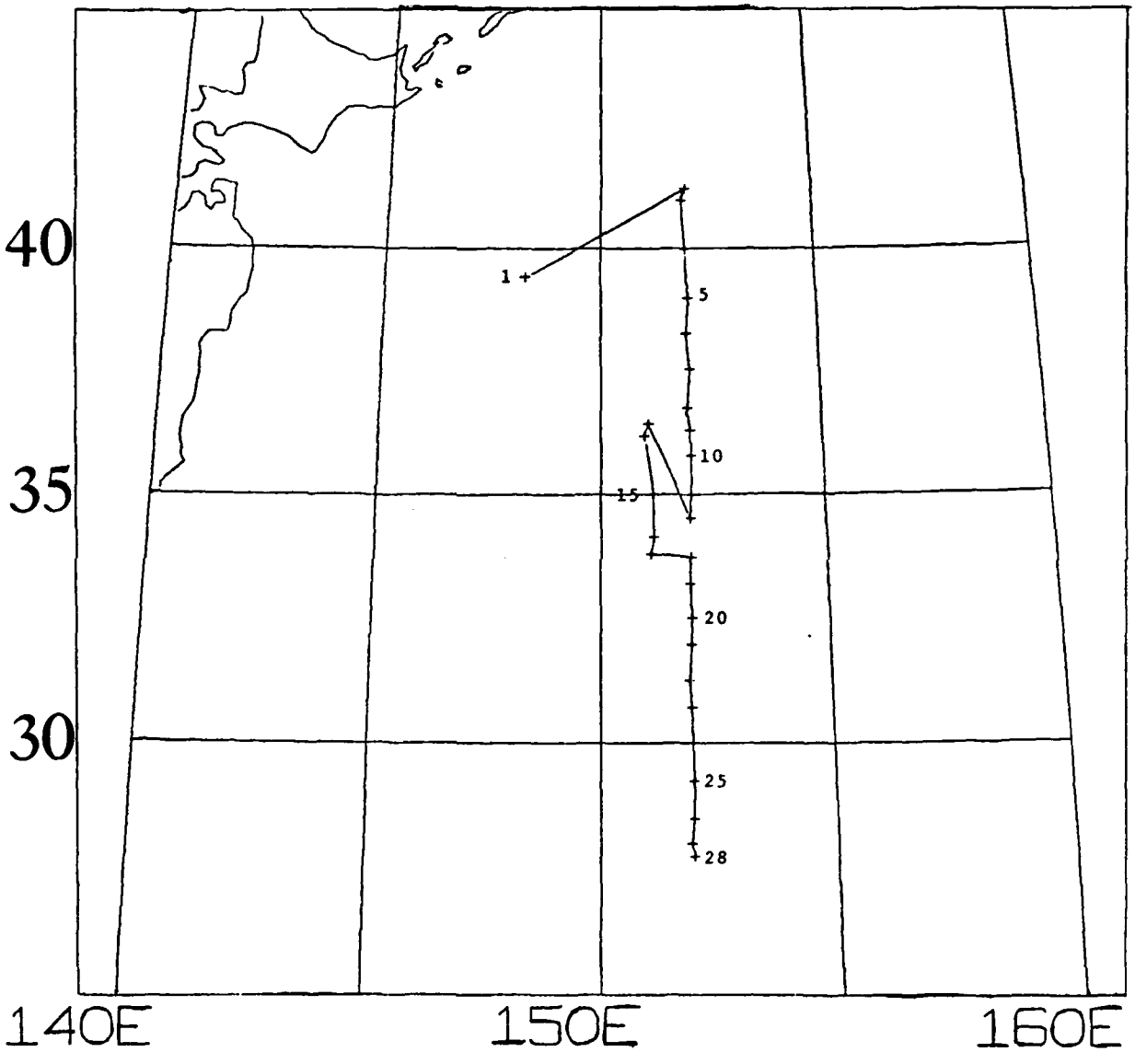
KUROSHIO EXTENSION ARRAY R/V THOMAS WASHINGTON



STATION AND CAST DESCRIPTION

RAMA-4 R/V T. WASHINGTON

STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	* REMARKS
1	1	3 JUL 80	SPE	39DEG 25.1MIN N	148DEG 15.1MIN E		5525	* WEIGHT TEST
1	2	3 JUL 80	CTD	39DEG 25.1MIN N	148DEG 15.1MIN E	0500	5525	* CTD #10, TEST STATION
2	1	4 JUL 80	CTD	41DEG 13.7MIN N	152DEG 0.6MIN E	0259	5354	* CTD #10, 5 CHECK SAMPLES
3	1	4 JUL 80	SPE	40DEG 59.2MIN N	151DEG 54.8MIN E		5361	* BUOY TESTS
3	2	4 JUL 80	CTD	40DEG 59.2MIN N	151DEG 54.8MIN E	1644	5361	* CTD #10, 6 CHECK SAMPLES
3	3	4 JUL 80	SPE	40DEG 59.4MIN N	152DEG 2.6MIN E	0048	5361	* MOORING #1 (695)
4	1	5 JUL 80	CTD	39DEG 59.4MIN N	151DEG 59.7MIN E	0923	5350	* CTD #10, 6 CHECK SAMPLES
5	1	5 JUL 80	SPE	38DEG 58.1MIN N	152DEG 2.6MIN E	2130	5647	* MOORING #2 (696)
5	2	5 JUL 80	CTD	38DEG 59.4MIN N	152DEG 2.8MIN E	0104	5647	* CTD #10, 5 CHECK SAMPLES
6	1	6 JUL 80	CTD	38DEG 15.3MIN N	151DEG 59.0MIN E	1125	5766	* CTD #10, 6 CHECK SAMPLES
7	1	6 JUL 80	SPE	37DEG 31.3MIN N	152DEG 2.6MIN E	2256	5845	* MOORING #3 (697)
7	2	7 JUL 80	CTD	37DEG 29.9MIN N	152DEG 2.1MIN E	0210	5845	* CTD #10, 6 CHECK SAMPLES
7	3	7 JUL 80	SPE	37DEG 29.9MIN N	152DEG 2.1MIN E		5845	* BUOY TESTS
8	1	7 JUL 80	CTD	36DEG 44.0MIN N	151DEG 58.3MIN E	1753	5455	* CTD #10, 6 CHECK SAMPLES
9	1	8 JUL 80	SPE	36DEG 16.7MIN N	152DEG 1.9MIN E	0432	5551	* MOORING #4 (698)
9	2	8 JUL 80	CTD	36DEG 16.6MIN N	152DEG 2.3MIN E	0810	5555	* CTD #10, 6 CHECK SAMPLES
10	1	8 JUL 80	CTD	35DEG 46.1MIN N	152DEG 2.4MIN E	1812	5892	* CTD #10, 6 CHECK SAMPLES
11	1	9 JUL 80	SPE	34DEG 58.0MIN N	152DEG 2.1MIN E	0723	6042	* MOORING #5 (699)
11	2	9 JUL 80	CTD	34DEG 58.8MIN N	152DEG 3.7MIN E	1050	6109	* CTD #10, 6 CHECK SAMPLES
12	1	9 JUL 80	CTD	34DEG 30.5MIN N	152DEG 0.2MIN E	2047	6113	* CTD #10, 6 CHECK SAMPLES
13	1	10 JUL 80	CTD	36DEG 26.4MIN N	151DEG 4.8MIN E	0043	5487	* CTD #10, 6 CHECK SAMPLES
14	1	11 JUL 80	CTD	36DEG 11.2MIN N	150DEG 60.0MIN E	0438	5821	* CTD #10, 6 CHECK SAMPLES
15	1	11 JUL 80	CTD	35DEG 0.8MIN N	151DEG 12.0MIN E	1208	6065	* CTD #10, 6 CHECK SAMPLES
16	1	11 JUL 80	CTD	34DEG 7.9MIN N	151DEG 11.0MIN E	1929	5967	* CTD #10, 6 CHECK SAMPLES
17	1	11 JUL 80	CTD	33DEG 47.4MIN N	151DEG 7.0MIN E	2314	5974	* CTD #10, 6 CHECK SAMPLES
18	1	12 JUL 80	CTD	33DEG 43.7MIN N	151DEG 59.8MIN E	0614	6008	* CTD #10, 6 CHECK SAMPLES
18	2	12 JUL 80	SPE	33DEG 47.5MIN N	152DEG 3.2MIN E	1049	5952	* MOORING #6 (700)
19	1	12 JUL 80	CTD	33DEG 11.5MIN N	151DEG 59.2MIN E	0107	5908	* CTD #10, 6 CHECK SAMPLES
20	1	13 JUL 80	CTD	32DEG 30.0MIN N	152DEG 0.6MIN E	1026	5773	* CTD #10, 6 CHECK SAMPLES
20	2	13 JUL 80	SPE	32DEG 30.1MIN N	152DEG 5.9MIN E	1431	5773	* BUOY TEST
20	3	13 JUL 80	SPE	32DEG 28.4MIN N	152DEG 10.5MIN E	2047	5770	* MOORING #7 (701)
21	1	14 JUL 80	CTD	31DEG 57.6MIN N	151DEG 59.9MIN E	0346	6180	* CTD #10, 6 CHECK SAMPLES
22	1	14 JUL 80	CTD	31DEG 14.7MIN N	151DEG 56.7MIN E	1309	5861	* CTD #10, 6 CHECK SAMPLES
22	2	14 JUL 80	SPE	31DEG 15.6MIN N	152DEG 5.0MIN E	2011	5899	* MOORING #8 (702)
23	1	15 JUL 80	CTD	30DEG 41.8MIN N	151DEG 58.4MIN E	0227	5921	* CTD #10, 6 CHECK SAMPLES
23	2	15 JUL 80	SPE	30DEG 42.3MIN N	151DEG 59.2MIN E		5899	* BUOY TEST
24	1	15 JUL 80	CTD	30DEG 0.1MIN N	151DEG 59.8MIN E	1607	5970	* CTD #10, 6 CHECK SAMPLES
24	2	15 JUL 80	SPE	30DEG 1.2MIN N	152DEG 0.1MIN E	2214	5966	* MOORING #9 (703)
25	1	16 JUL 80	CTD	29DEG 14.1MIN N	152DEG 0.2MIN E	0744	5891	* CTD #10, 6 CHECK SAMPLES
26	1	16 JUL 80	CTD	28DEG 28.9MIN N	151DEG 59.4MIN E	1633	5918	* CTD #10, 6 CHECK SAMPLES
27	1	17 JUL 80	SPE	27DEG 59.5MIN N	151DEG 56.3MIN E	0210	6073	* MOORING #10 (704)
27	2	17 JUL 80	CTD	27DEG 59.0MIN N	151DEG 59.0MIN E	0538	6101	* CTD #10, 6 CHECK SAMPLES
28	1	17 JUL 80	CTD	27DEG 44.0MIN N	152DEG 0.1MIN E	1131	5959	* CTD #10, 6 CHECK SAMPLES

CTD DATA REPORT

CTD REPORT RAMA-4 STATION: 2 CAST: 1 DN
POSITION: 41DEG 13.7MIN N 152DEG 0.6MIN E DATE: 4 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	15.256	15.256	34.198	25.330	25.330	266.04	0.000	0.0	1506.54	
10.0	9.9	15.227	15.225	34.199	25.338	25.382	265.63	0.027	0.1	1506.61	13.3
20.0	19.8	15.119	15.116	34.193	25.357	25.446	264.07	0.053	0.5	1506.43	78.0
30.0	29.8	13.860	13.856	34.024	25.499	25.632	250.89	0.079	1.2	1502.34	195.6
40.0	39.7	13.251	13.245	34.203	25.763	25.941	226.04	0.104	2.1	1500.71	286.4
50.0	49.6	11.516	11.510	34.191	26.092	26.317	194.90	0.125	3.2	1494.97	206.8
60.0	59.5	11.071	11.064	34.212	26.190	26.461	185.76	0.144	4.6	1493.61	75.2
70.0	69.5	10.878	10.869	34.240	26.247	26.563	180.58	0.162	6.1	1493.12	50.2
80.0	79.4	10.479	10.469	34.208	26.293	26.655	176.38	0.180	7.8	1491.83	57.3
90.0	89.3	9.974	9.963	34.187	26.364	26.772	169.79	0.197	9.7	1490.16	72.3
100.0	99.2	9.407	9.396	34.164	26.441	26.895	162.61	0.214	11.7	1488.23	50.6
110.0	109.1	9.098	9.086	34.133	26.467	26.967	160.26	0.230	13.9	1487.22	27.6
120.0	119.1	8.844	8.831	34.119	26.497	27.043	157.62	0.246	16.3	1486.42	30.6
130.0	129.0	8.372	8.358	34.066	26.529	27.122	154.66	0.262	18.8	1484.76	23.3
140.0	138.9	8.113	8.099	34.034	26.543	27.182	153.43	0.277	21.5	1483.90	10.4
150.0	148.8	7.716	7.701	33.966	26.548	27.234	153.02	0.293	24.3	1482.47	19.9
160.0	158.7	6.783	6.768	33.840	26.578	27.314	149.93	0.308	27.3	1478.87	26.2
170.0	168.7	6.675	6.659	33.846	26.598	27.380	148.21	0.323	30.4	1478.61	22.6
180.0	178.6	6.516	6.500	33.853	26.624	27.453	145.79	0.337	33.7	1478.16	16.9
190.0	188.5	6.157	6.140	33.802	26.630	27.507	145.22	0.352	37.1	1476.84	10.9
200.0	198.4	5.917	5.900	33.781	26.643	27.567	143.97	0.366	40.6	1476.02	9.4
210.0	208.3	5.696	5.678	33.751	26.647	27.618	143.68	0.381	44.3	1475.26	11.0
220.0	218.2	5.521	5.503	33.746	26.664	27.682	142.11	0.395	48.2	1474.71	12.5
230.0	228.2	5.568	5.549	33.763	26.672	27.736	141.50	0.409	52.2	1475.08	12.0
240.0	238.1	5.219	5.200	33.730	26.686	27.799	140.04	0.423	56.3	1473.79	20.3
250.0	248.0	5.043	5.023	33.735	26.710	27.870	137.77	0.437	60.6	1473.24	23.2
260.0	257.9	5.103	5.082	33.773	26.734	27.939	135.71	0.451	65.0	1473.69	21.2
270.0	267.8	5.128	5.106	33.803	26.755	28.006	133.86	0.465	69.5	1474.00	19.4
280.0	277.7	4.909	4.887	33.794	26.772	28.072	132.17	0.478	74.2	1473.25	11.3
290.0	287.6	4.541	4.519	33.745	26.773	28.122	131.91	0.491	79.0	1471.84	3.4
300.0	297.6	4.489	4.467	33.741	26.776	28.171	131.73	0.504	83.9	1471.78	4.9
310.0	307.5	4.243	4.220	33.715	26.781	28.225	131.17	0.517	89.0	1470.89	17.1
320.0	317.4	4.639	4.615	33.807	26.812	28.299	128.60	0.531	94.2	1472.81	22.4
330.0	327.3	4.600	4.575	33.824	26.830	28.363	127.02	0.543	99.5	1472.83	11.7
340.0	337.2	4.465	4.439	33.812	26.835	28.416	126.54	0.556	104.9	1472.42	14.2
350.0	347.1	4.729	4.702	33.880	26.860	28.485	124.44	0.569	110.5	1473.76	18.8
360.0	357.0	4.691	4.663	33.894	26.876	28.547	123.08	0.581	116.2	1473.78	12.5
370.0	366.9	4.525	4.497	33.882	26.884	28.603	122.24	0.593	122.0	1473.24	6.7
380.0	376.8	4.434	4.405	33.873	26.887	28.653	122.01	0.605	128.0	1473.01	8.4
390.0	386.7	4.259	4.230	33.865	26.899	28.713	120.81	0.618	134.0	1472.44	15.9
400.0	396.7	4.146	4.117	33.873	26.916	28.778	119.09	0.630	140.2	1472.14	13.7
410.0	406.6	4.079	4.049	33.875	26.925	28.834	118.33	0.641	146.5	1472.03	13.5
420.0	416.5	4.174	4.143	33.912	26.945	28.899	116.66	0.653	152.9	1472.63	17.3
430.0	426.4	3.967	3.936	33.904	26.959	28.962	115.14	0.665	159.4	1471.92	11.7
440.0	436.3	3.905	3.874	33.904	26.965	29.015	114.58	0.676	166.1	1471.82	9.7
450.0	446.2	3.959	3.927	33.928	26.979	29.075	113.44	0.688	172.8	1472.24	11.8
460.0	456.1	3.851	3.818	33.927	26.989	29.132	112.46	0.699	179.7	1471.95	7.3
470.0	466.0	3.747	3.714	33.917	26.991	29.182	112.21	0.710	186.7	1471.66	11.5
480.0	475.9	3.721	3.687	33.939	27.011	29.249	110.39	0.721	193.8	1471.74	13.8
490.0	485.8	3.777	3.742	33.957	27.020	29.303	109.70	0.732	201.0	1472.16	12.6
500.0	495.7	3.797	3.761	33.982	27.038	29.367	108.12	0.743	208.3	1472.44	18.4
510.0	505.6	3.772	3.736	34.004	27.058	29.434	106.29	0.754	215.7	1472.53	15.8
520.0	515.5	3.755	3.718	34.017	27.070	29.492	105.23	0.765	223.2	1472.63	9.7
530.0	525.4	3.725	3.687	34.022	27.077	29.546	104.61	0.775	230.8	1472.68	6.9
540.0	535.3	3.643	3.605	34.019	27.083	29.599	104.06	0.786	238.6	1472.49	10.3
550.0	545.2	3.626	3.587	34.035	27.097	29.660	102.76	0.796	246.4	1472.60	12.3
560.0	555.1	3.595	3.556	34.044	27.108	29.717	101.84	0.806	254.3	1472.64	9.8
570.0	565.0	3.647	3.607	34.063	27.118	29.772	101.04	0.816	262.4	1473.05	7.4
580.0	574.9	3.697	3.656	34.077	27.124	29.824	100.60	0.826	270.5	1473.44	13.7
590.0	584.8	3.939	3.896	34.140	27.151	29.893	98.57	0.836	278.7	1474.70	15.7
600.0	594.7	4.113	4.068	34.178	27.164	29.949	97.73	0.846	287.1	1475.64	8.1
610.0	604.6	4.164	4.118	34.194	27.171	30.001	97.19	0.856	295.5	1476.04	6.8
620.0	614.5	4.137	4.090	34.199	27.178	30.055	96.62	0.866	304.0	1476.10	10.9
630.0	624.4	4.049	4.002	34.205	27.192	30.116	95.28	0.875	312.6	1475.90	13.5
640.0	634.3	4.003	3.955	34.214	27.204	30.175	94.19	0.885	321.3	1475.88	12.8
650.0	644.2	3.974	3.926	34.227	27.217	30.234	92.98	0.894	330.1	1475.94	10.7
660.0	654.1	3.967	3.918	34.236	27.225	30.289	92.32	0.903	339.0	1476.08	5.7
670.0	664.0	3.963	3.913	34.240	27.228	30.338	92.07	0.913	348.0	1476.23	5.6
680.0	673.9	3.943	3.893	34.247	27.236	30.392	91.41	0.922	357.1	1476.32	9.0
690.0	683.8	3.890	3.839	34.252	27.245	30.448	90.53	0.931	366.3	1476.27	9.4
700.0	693.7	3.842	3.791	34.256	27.253	30.503	89.80	0.940	375.5	1476.24	9.3
710.0	703.6	3.815	3.763	34.265	27.263	30.560	88.91	0.949	384.9	1476.30	9.2
720.0	713.5	3.817	3.764	34.276	27.272	30.614	88.19	0.958	394.3	1476.48	7.7
730.0	723.4	3.784	3.731	34.280	27.278	30.667	87.62	0.967	403.8	1476.51	10.3
740.0	733.3	3.746	3.692	34.292	27.292	30.727	86.38	0.975	413.4	1476.53	11.8
750.0	743.2	3.692	3.637	34.297	27.301	30.784	85.50	0.984	423.1	1476.47	9.1
760.0	753.1	3.668	3.613	34.304	27.309	30.838	84.78	0.992	432.9	1476.54	7.7
770.0	763.0	3.638	3.582	34.309	27.316	30.892	84.19	1.001	442.8	1476.59	6.4
780.0	772.9	3.618	3.562	34.313	27.321	30.943	83.73	1.009	452.7	1476.67	7.5
790.0	782.8	3.544	3.487	34.314	27.329	30.999	82.92	1.018	462.7	1476.52	6.1
800.0	792.6	3.518	3.461	34.314	27.331	31.048	82.72	1.026	472.8	1476.57	6.3
810.0	802.5	3.452	3.394	34.317	27.340	31.104	81.86	1.034	483.0	1476.46	7.0
820.0	812.4	3.396	3.338	34.314	27.343	31.154	81.55	1.042	493.3	1476.38	5.4
830.0	822.3	3.352	3.293	34.316	27.349	31.207	80.99	1.050	503.6	1476.36	7.4
840.0	832.2	3.320	3.261	34.322	27.356	31.261	80.29	1.059	514.1	1476.40	7.1
850.0	842.1	3.364	3.304	34.336	27.364	31.313	79.79	1.067	524.6	1476.76	7.3
860.0	852.0	3.324	3.263	34.341	27.371	31.368	79.06	1.075	535.2	1476.76	7.3
870.0	861.9	3.285	3.224	34.343	27.377	31.420	78.56	1.082	545.8	1476.76	5.2
880.0	871.8	3.254	3.192	34.344	27.380	31.470	78.23	1.090	556.6	1476.80	5.1
890.0	881.6	3.215	3.153	34.346	27.385	31.522	77.72	1.098	567.4	1476.80	4.9
900.0	891.5	3.197	3.134	34.348	27.389	31.572	77.44	1.106	578.3	1476.89	5.8
910.0	901.4	3.157	3.094	34.352	27.396	31.626	76.78	1.114	589.3	1476.88	7.3
920.0	911.3	3.131	3.067	34.357	27.402	31.679	76.20	1.121	600.3	1476.94	4.8
930.0	921.2	3.065	3.001	34.351	27.403	31.728	76.01	1.129	611.4	1476.82	4.9
940.0	931.1	3.053	2.988	34.358	27.410	31.781	75.41	1.136	622.6	1476.94	6.5
950.0	941.0	3.021	2.956	34.361	27.415	31.833	74.91	1.144	633.9	1476.97	4.9
960.0	950.9	3.015	2.949	34.365	27.419	31.883	74.63	1.151	645.2	1477.11	4.1
970.0	960.7	3.005	2.938	34.369	27.423	31.933	74.28	1.159	656.7	1477.24	5.1

3 APR 81

CTD REPORT RAMA-4 STATION: 2 CAST: 1 DN
POSITION: 41DEG 13.7MIN N 152DEG 0.6MIN E DATE: 4 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	2.988	2.921	34.374	27.428	31.985	73.79	1.166	668.1	1477.33	5.7
990.0	980.5	2.948	2.880	34.375	27.433	32.036	73.35	1.174	679.7	1477.33	3.6
1000.0	990.4	2.944	2.875	34.377	27.435	32.084	73.23	1.181	691.3	1477.48	3.3
1050.0	1039.8	2.917	2.845	34.400	27.456	32.335	71.54	1.217	750.6	1478.21	5.2
1100.0	1089.2	2.808	2.733	34.414	27.477	32.589	69.63	1.252	811.6	1478.58	4.7
1150.0	1138.6	2.723	2.645	34.433	27.499	32.843	67.59	1.287	874.3	1479.06	3.4
1200.0	1188.0	2.647	2.566	34.446	27.516	33.092	66.09	1.320	938.7	1479.57	4.2
1250.0	1237.3	2.571	2.486	34.462	27.536	33.342	64.35	1.353	1004.6	1480.08	3.8
1300.0	1286.7	2.512	2.424	34.475	27.551	33.588	63.01	1.385	1072.2	1480.67	2.2
1350.0	1336.0	2.465	2.374	34.485	27.563	33.830	62.02	1.416	1141.3	1481.30	3.3
1400.0	1385.4	2.405	2.310	34.496	27.577	34.075	60.80	1.447	1211.9	1481.88	1.6
1450.0	1434.7	2.341	2.243	34.506	27.591	34.319	59.60	1.477	1284.0	1482.44	3.6
1500.0	1484.0	2.298	2.197	34.518	27.604	34.561	58.50	1.506	1357.6	1483.09	1.9
1550.0	1533.3	2.260	2.155	34.527	27.614	34.801	57.63	1.535	1432.6	1483.77	1.7
1600.0	1582.6	2.229	2.121	34.535	27.623	35.039	56.92	1.564	1509.0	1484.47	2.3
1650.0	1631.9	2.189	2.077	34.542	27.632	35.277	56.18	1.592	1586.8	1485.13	2.3
1700.0	1681.2	2.154	2.038	34.549	27.641	35.514	55.49	1.620	1665.9	1485.82	1.4
1750.0	1730.5	2.118	1.999	34.558	27.651	35.753	54.63	1.648	1746.4	1486.50	2.1
1800.0	1779.7	2.086	1.963	34.565	27.660	35.989	53.97	1.675	1828.3	1487.21	2.0
1850.0	1829.0	2.043	1.917	34.572	27.669	36.227	53.16	1.702	1911.4	1487.86	2.2
1900.0	1878.2	2.008	1.878	34.579	27.677	36.463	52.44	1.728	1995.8	1488.55	2.8
1950.0	1927.4	1.973	1.839	34.586	27.686	36.699	51.72	1.754	2081.6	1489.24	1.6
2000.0	1976.6	1.950	1.812	34.590	27.691	36.931	51.36	1.780	2168.5	1489.98	0.8
2050.0	2025.8	1.930	1.789	34.593	27.695	37.162	51.08	1.806	2256.7	1490.73	1.6
2100.0	2075.0	1.898	1.753	34.600	27.703	37.397	50.38	1.831	2346.2	1491.43	2.2
2150.0	2124.2	1.870	1.721	34.605	27.710	37.630	49.88	1.856	2436.9	1492.15	1.6
2200.0	2173.4	1.835	1.682	34.609	27.716	37.863	49.33	1.881	2528.7	1492.84	1.7
2250.0	2222.6	1.801	1.644	34.616	27.724	38.098	48.59	1.905	2621.8	1493.54	1.9
2300.0	2271.7	1.772	1.612	34.620	27.730	38.330	48.10	1.930	2716.0	1494.26	1.6
2350.0	2320.9	1.747	1.583	34.625	27.736	38.561	47.61	1.954	2811.5	1494.99	1.6
2400.0	2370.0	1.730	1.562	34.629	27.740	38.791	47.29	1.977	2908.0	1495.77	1.4
2450.0	2419.1	1.710	1.537	34.632	27.745	39.020	46.98	2.001	3005.7	1496.52	0.5
2500.0	2468.2	1.690	1.513	34.635	27.749	39.249	46.67	2.024	3104.5	1497.28	1.5
2550.0	2517.3	1.672	1.491	34.638	27.753	39.477	46.38	2.047	3204.5	1498.05	1.5
2600.0	2566.4	1.650	1.465	34.642	27.758	39.707	45.97	2.071	3305.6	1498.80	1.6
2650.0	2615.5	1.638	1.449	34.644	27.760	39.933	45.82	2.093	3407.8	1499.60	0.9
2700.0	2664.6	1.623	1.429	34.647	27.764	40.160	45.56	2.116	3511.0	1500.38	0.4
2750.0	2713.6	1.608	1.410	34.650	27.768	40.388	45.31	2.139	3615.4	1501.16	1.1
2800.0	2762.7	1.596	1.394	34.651	27.770	40.612	45.23	2.162	3720.9	1501.96	0.4
2850.0	2811.7	1.581	1.374	34.655	27.774	40.840	44.88	2.184	3827.4	1502.75	0.9
2900.0	2860.7	1.574	1.363	34.656	27.776	41.064	44.87	2.207	3935.1	1503.57	0.3
2950.0	2909.7	1.564	1.348	34.657	27.778	41.288	44.81	2.229	4043.8	1504.37	0.4
3000.0	2958.8	1.552	1.331	34.660	27.781	41.513	44.57	2.251	4153.5	1505.17	0.7
3050.0	3007.8	1.541	1.316	34.662	27.784	41.738	44.42	2.274	4264.4	1505.98	0.8
3100.0	3056.7	1.532	1.302	34.663	27.786	41.961	44.37	2.296	4376.3	1506.79	0.3
3150.0	3105.7	1.526	1.291	34.665	27.788	42.184	44.29	2.318	4489.3	1507.62	0.5
3200.0	3154.7	1.516	1.277	34.667	27.791	42.407	44.13	2.340	4603.3	1508.43	0.7
3250.0	3203.6	1.508	1.264	34.668	27.792	42.630	44.08	2.362	4718.4	1509.25	0.2
3300.0	3252.6	1.502	1.253	34.669	27.794	42.851	44.07	2.384	4834.5	1510.08	0.4
3350.0	3301.5	1.496	1.242	34.670	27.795	43.073	44.06	2.406	4951.8	1510.91	0.7
3400.0	3350.4	1.495	1.236	34.670	27.796	43.293	44.18	2.428	5070.0	1511.76	0.6
3450.0	3399.4	1.490	1.226	34.671	27.797	43.514	44.17	2.450	5189.3	1512.59	0.6
3500.0	3448.3	1.489	1.220	34.671	27.798	43.733	44.30	2.472	5309.7	1513.44	0.3
3550.0	3497.2	1.482	1.208	34.673	27.800	43.954	44.18	2.495	5431.1	1514.27	0.7
3600.0	3546.0	1.478	1.199	34.674	27.802	44.174	44.18	2.517	5553.6	1515.11	0.5
3650.0	3594.9	1.475	1.191	34.674	27.802	44.393	44.26	2.539	5677.2	1515.96	0.2
3700.0	3643.8	1.473	1.183	34.676	27.804	44.613	44.31	2.561	5801.7	1516.81	0.3
3750.0	3692.6	1.469	1.174	34.676	27.805	44.832	44.30	2.583	5927.3	1517.65	0.5
3800.0	3741.5	1.468	1.168	34.677	27.806	45.050	44.33	2.605	6054.0	1518.51	0.0
3850.0	3790.3	1.468	1.162	34.677	27.806	45.268	44.47	2.627	6181.[illegible]	1519.37	0.4
3900.0	3839.1	1.464	1.153	34.678	27.808	45.487	44.45	2.649	6310.0	1520.[illegible]	0.8
3950.0	3887.9	1.463	1.147	34.679	27.809	45.705	44.50	2.671	6440.0	1521.07	0.0
4000.0	3936.7	1.461	1.139	34.681	27.811	45.923	44.48	2.694	6570.[illegible]	1522.[illegible]	0.3
4050.0	3985.5	1.461	1.134	34.681	27.811	46.140	44.[illegible]	2.716	6703.[illegible]	1522.[illegible]	0.9
4100.0	4034.3	1.461	1.128	34.681	27.812	46.356	44.[illegible]	2.738	6836.[illegible]	1523.[illegible]	0.[illegible]
4150.0	4083.1	1.460	1.121	34.681	27.812	46.571	44.[illegible]	2.760	6970.[illegible]	1524.[illegible]	0.[illegible]
4200.0	4131.8	1.459	1.115	34.681	27.813	46.788	44.[illegible]	2.783	[illegible]	1525.[illegible]	0.[illegible]
4250.0	4180.6	1.460	1.110	34.682	27.814	47.004	44.[illegible]	2.806	[illegible]	1526.24	[illegible]
4300.0	4229.3	1.462	1.106	34.683	27.815	47.220	44.[illegible]	2.828	[illegible]	[illegible]	[illegible]
4350.0	4278.0	1.463	1.102	34.683	27.815	47.435	44.[illegible]	2.851	[illegible]	[illegible]	[illegible]
4400.0	4326.8	1.465	1.098	34.683	27.815	47.649	44.[illegible]	2.874	[illegible]	[illegible]	[illegible]
4450.0	4375.5	1.468	1.095	34.684	27.816	47.864	44.[illegible]	2.896	[illegible]	[illegible]	[illegible]
4500.0	4424.2	1.470	1.091	34.684	27.817	48.[illegible]	44.[illegible]	2.919	[illegible]	[illegible]	[illegible]
4550.0	4472.9	1.474	1.089	34.684	27.817	48.[illegible]	44.[illegible]	2.942	[illegible]	[illegible]	[illegible]
4600.0	4521.5	1.478	1.087	34.684	27.817	48.[illegible]	44.[illegible]	2.965	[illegible]	[illegible]	[illegible]
4650.0	4570.2	1.483	1.086	34.683	27.817	48.[illegible]	44.[illegible]	2.988	[illegible]	[illegible]	[illegible]
4700.0	4618.8	1.485	1.082	34.684	27.817	48.[illegible]	44.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4750.0	4667.5	1.490	1.080	34.685	27.818	49.[illegible]	44.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4800.0	4716.1	1.495	1.079	34.684	27.817	49.[illegible]	44.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4850.0	4764.8	1.499	1.077	34.684	27.818	49.[illegible]	44.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4900.0	4813.4	1.504	1.076	34.684	27.818	49.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4950.0	4862.0	1.508	1.073	34.684	27.818	49.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000.0	4910.6	1.514	1.073	34.685	27.819	50.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5050.0	4959.2	1.519	1.072	34.685	27.819	50.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5100.0	5007.7	1.525	1.071	34.684	27.818	50.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5150.0	5056.3	1.530	1.070	34.684	27.818	50.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5200.0	5104.8	1.536	1.069	34.684	27.818	[illegible].44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5250.0	5153.4	1.541	1.068	34.684	27.818	[illegible].[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5300.0	5201.9	1.546	1.066	34.685	27.819	[illegible].46	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5350.0	5250.4	1.553	1.066	34.684	27.818	[illegible].[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5400.0	5298.9	1.559	1.066	34.684	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CTD REPORT RAMA-4 STATION: 3 CAST: 2 DN
POSITION: 40DEG 59.2MIN N 151DEG 54.8MIN E DATE: 4 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	14.420	14.420	34.133	25.463	25.463	253.39	0.000	0.0	1503.80	
10.0	9.9	14.166	14.165	34.124	25.511	25.555	249.16	0.025	0.1	1503.13	99.1
20.0	19.8	12.882	12.879	33.985	25.668	25.758	234.43	0.049	0.5	1498.90	78.4
30.0	29.8	12.864	12.860	33.986	25.673	25.807	234.27	0.073	1.1	1499.00	172.7
40.0	39.7	11.998	11.993	34.224	26.026	26.206	200.89	0.095	1.9	1496.51	251.0
50.0	49.6	11.317	11.311	34.274	26.193	26.418	185.26	0.115	3.0	1494.38	104.7
60.0	59.5	11.178	11.170	34.305	26.243	26.513	180.77	0.133	4.2	1494.09	55.2
70.0	69.5	10.479	10.471	34.225	26.306	26.623	174.92	0.151	5.6	1491.69	70.3
80.0	79.4	9.950	9.941	34.211	26.387	26.749	167.42	0.168	7.2	1489.94	52.9
90.0	89.3	9.611	9.601	34.173	26.414	26.823	164.97	0.185	9.0	1488.83	28.8
100.0	99.2	9.287	9.276	34.144	26.445	26.899	162.21	0.201	10.9	1487.77	25.9
110.0	109.1	9.019	9.007	34.116	26.467	26.967	160.31	0.217	12.9	1486.91	24.0
120.0	119.1	8.820	8.807	34.110	26.494	27.040	157.92	0.233	15.2	1486.32	24.3
130.0	129.0	8.658	8.644	34.106	26.516	27.108	155.95	0.249	17.6	1485.88	20.6
140.0	138.9	8.323	8.308	34.064	26.535	27.173	154.27	0.264	20.1	1484.73	16.3
150.0	148.8	8.092	8.077	34.036	26.548	27.233	153.16	0.280	22.8	1483.99	17.6
160.0	158.7	7.810	7.794	34.010	26.569	27.301	151.24	0.295	25.7	1483.05	16.3
170.0	168.7	7.564	7.547	33.978	26.579	27.358	150.32	0.310	28.7	1482.23	16.8
180.0	178.6	7.401	7.383	33.977	26.602	27.427	148.30	0.325	31.8	1481.76	17.6
190.0	188.5	7.218	7.200	33.960	26.614	27.486	147.22	0.340	35.1	1481.20	18.3
200.0	198.4	6.896	6.877	33.933	26.637	27.556	145.07	0.354	38.6	1480.08	10.4
210.0	208.3	6.676	6.657	33.890	26.633	27.598	145.53	0.369	42.1	1479.32	3.9
220.0	218.2	6.603	6.583	33.891	26.643	27.655	144.65	0.383	45.9	1479.20	14.4
230.0	228.2	6.233	6.213	33.851	26.659	27.720	143.03	0.398	49.7	1477.85	8.9
240.0	238.1	6.002	5.981	33.812	26.658	27.765	143.21	0.412	53.8	1477.04	2.5
250.0	248.0	5.885	5.864	33.799	26.662	27.817	142.86	0.427	57.9	1476.72	6.6
260.0	257.9	5.773	5.751	33.791	26.669	27.871	142.22	0.441	62.2	1476.43	8.3
270.0	267.8	5.754	5.731	33.799	26.678	27.926	141.51	0.455	66.7	1476.52	8.1
280.0	277.7	5.634	5.610	33.789	26.685	27.979	140.93	0.469	71.2	1476.19	10.1
290.0	287.6	5.550	5.526	33.792	26.697	28.038	139.82	0.483	76.0	1476.02	13.6
300.0	297.6	5.655	5.630	33.828	26.713	28.099	138.52	0.497	80.8	1476.65	18.8
310.0	307.5	5.488	5.462	33.831	26.735	28.169	136.40	0.511	85.8	1476.14	21.8
320.0	317.4	5.394	5.368	33.843	26.756	28.237	134.52	0.524	90.9	1475.94	16.5
330.0	327.3	5.425	5.398	33.864	26.769	28.295	133.43	0.538	96.2	1476.25	15.5
340.0	337.2	5.325	5.297	33.872	26.787	28.360	131.76	0.551	101.6	1476.02	15.8
350.0	347.1	5.287	5.258	33.883	26.800	28.420	130.61	0.564	107.1	1476.04	15.8
360.0	357.0	5.223	5.194	33.897	26.819	28.485	128.92	0.577	112.8	1475.96	16.8
370.0	366.9	5.117	5.087	33.900	26.833	28.547	127.57	0.590	118.6	1475.69	22.9
380.0	376.8	5.026	4.996	33.926	26.864	28.625	124.69	0.603	124.5	1475.52	22.3
390.0	386.7	4.842	4.811	33.916	26.877	28.685	123.43	0.615	130.5	1474.91	13.0
400.0	396.7	4.714	4.683	33.912	26.888	28.744	122.38	0.627	136.7	1474.55	13.1
410.0	406.6	4.544	4.513	33.905	26.901	28.804	121.10	0.640	142.9	1474.00	17.6
420.0	416.5	4.445	4.413	33.918	26.922	28.872	119.15	0.652	149.3	1473.77	17.5
430.0	426.4	4.411	4.379	33.931	26.935	28.933	117.89	0.664	155.9	1473.80	9.1
440.0	436.3	4.266	4.233	33.915	26.938	28.984	117.59	0.675	162.5	1473.34	9.9
450.0	446.2	4.354	4.320	33.948	26.955	29.046	116.18	0.687	169.2	1473.91	13.3
460.0	456.1	4.495	4.460	33.983	26.968	29.103	115.22	0.699	176.1	1474.71	13.6
470.0	466.0	4.686	4.649	34.033	26.987	29.166	113.74	0.710	183.1	1475.72	15.7
480.0	475.9	4.708	4.670	34.056	27.003	29.228	112.38	0.721	190.2	1476.00	15.4
490.0	485.8	4.511	4.473	34.046	27.017	29.290	110.98	0.733	197.4	1475.34	13.0
500.0	495.7	4.387	4.349	34.041	27.026	29.347	110.07	0.744	204.7	1474.98	16.3
510.0	505.6	4.401	4.362	34.072	27.049	29.415	108.00	0.754	212.1	1475.24	17.0
520.0	515.5	4.404	4.364	34.088	27.062	29.474	106.94	0.765	219.6	1475.44	11.3
530.0	525.4	4.478	4.437	34.113	27.074	29.531	106.01	0.776	227.3	1475.94	10.2
540.0	535.3	4.330	4.289	34.103	27.081	29.587	105.18	0.786	235.0	1475.48	9.5
550.0	545.2	4.257	4.215	34.104	27.090	29.643	104.38	0.797	242.8	1475.34	10.6
560.0	555.1	4.267	4.225	34.121	27.102	29.701	103.32	0.807	250.8	1475.56	12.9
570.0	565.0	4.175	4.132	34.125	27.115	29.761	102.09	0.818	258.8	1475.35	12.9
580.0	574.9	4.069	4.026	34.125	27.126	29.820	101.02	0.828	267.0	1475.07	13.0
590.0	584.8	4.108	4.064	34.149	27.141	29.880	99.75	0.838	275.2	1475.42	12.3
600.0	594.7	4.043	3.998	34.153	27.151	29.937	98.81	0.848	283.5	1475.32	11.4
610.0	604.6	3.908	3.863	34.149	27.161	29.996	97.73	0.858	292.0	1474.91	12.0
620.0	614.5	3.960	3.914	34.172	27.174	30.054	96.68	0.867	300.5	1475.32	8.9
630.0	624.4	3.702	3.657	34.142	27.176	30.106	96.20	0.877	309.2	1474.36	7.0
640.0	634.3	3.645	3.599	34.144	27.183	30.160	95.52	0.887	317.9	1474.28	7.6
650.0	644.2	3.631	3.585	34.151	27.190	30.214	94.91	0.896	326.7	1474.40	8.3
660.0	654.1	3.608	3.561	34.160	27.199	30.270	94.09	0.906	335.6	1474.47	8.4
670.0	664.0	3.590	3.542	34.167	27.207	30.323	93.46	0.915	344.6	1474.57	8.4
680.0	673.9	3.625	3.576	34.184	27.217	30.379	92.64	0.924	353.7	1474.90	12.9
690.0	683.8	3.673	3.623	34.212	27.235	30.442	91.14	0.934	362.9	1475.30	10.2
700.0	693.7	3.687	3.636	34.219	27.239	30.492	90.85	0.943	372.2	1475.54	5.6
710.0	703.6	3.697	3.646	34.230	27.247	30.546	90.23	0.952	381.6	1475.75	6.3
720.0	713.5	3.687	3.635	34.235	27.252	30.597	89.81	0.961	391.1	1475.88	7.4
730.0	723.4	3.663	3.610	34.244	27.261	30.653	88.98	0.970	400.6	1475.96	10.9
740.0	733.3	3.631	3.578	34.255	27.273	30.711	87.88	0.979	410.2	1476.00	10.5
750.0	743.2	3.580	3.526	34.259	27.281	30.767	87.11	0.987	420.0	1475.95	9.2
760.0	753.1	3.579	3.524	34.271	27.291	30.822	86.27	0.996	429.8	1476.12	8.6
770.0	763.0	3.505	3.450	34.270	27.297	30.876	85.63	1.005	439.7	1475.97	9.3
780.0	772.9	3.498	3.442	34.283	27.308	30.934	84.65	1.013	449.7	1476.12	8.0
790.0	782.8	3.479	3.423	34.287	27.313	30.985	84.23	1.022	459.7	1476.21	5.4
800.0	792.6	3.478	3.421	34.294	27.319	31.037	83.78	1.030	469.9	1476.38	6.4
810.0	802.5	3.463	3.405	34.301	27.326	31.090	83.16	1.038	480.1	1476.49	5.5
820.0	812.4	3.465	3.406	34.306	27.330	31.140	82.90	1.047	490.4	1476.67	7.4
830.0	822.3	3.431	3.372	34.315	27.341	31.197	81.92	1.055	500.8	1476.70	7.9
840.0	832.2	3.420	3.360	34.320	27.346	31.248	81.52	1.063	511.3	1476.82	6.0
850.0	842.1	3.367	3.307	34.321	27.351	31.301	80.93	1.071	521.8	1476.76	8.1
860.0	852.0	3.334	3.273	34.328	27.360	31.356	80.13	1.079	532.5	1476.79	7.6
870.0	861.9	3.308	3.247	34.332	27.366	31.409	79.63	1.087	543.2	1476.85	7.2
880.0	871.8	3.285	3.223	34.339	27.373	31.463	78.92	1.095	554.0	1476.92	5.7
890.0	881.6	3.272	3.209	34.341	27.376	31.512	78.70	1.103	564.8	1477.03	5.4
900.0	891.5	3.251	3.188	34.348	27.384	31.566	78.01	1.111	575.8	1477.12	7.5
910.0	901.4	3.229	3.165	34.354	27.391	31.619	77.40	1.119	586.8	1477.19	6.5
920.0	911.3	3.205	3.140	34.358	27.396	31.671	76.94	1.126	597.9	1477.26	6.4
930.0	921.2	3.178	3.113	34.363	27.403	31.724	76.33	1.134	609.1	1477.31	5.3
940.0	931.1	3.161	3.095	34.365	27.406	31.774	76.06	1.142	620.3	1477.41	3.4
950.0	941.0	3.148	3.082	34.367	27.409	31.823	75.83	1.149	631.6	1477.52	5.2
960.0	950.9	3.118	3.051	34.372	27.415	31.876	75.21	1.157	643.0	1477.56	7.0
970.0	960.7	3.094	3.026	34.377	27.421	31.929	74.64	1.164	654.5	1477.63	5.4

CTD REPORT RAMA-4 STATION: 3 CAST: 2 DN
POSITION: 40DEG 59.2MIN N 151DEG 54.8MIN E DATE: 4 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.073	3.005	34.379	27.425	31.979	74.33	1.172	666.0	1477.70	4.7
990.0	980.5	3.054	2.985	34.383	27.430	32.030	73.91	1.179	677.7	1477.79	5.1
1000.0	990.4	3.038	2.969	34.387	27.435	32.081	73.49	1.187	689.4	1477.89	4.7
1050.0	1039.8	2.930	2.858	34.404	27.458	32.337	71.38	1.223	748.9	1478.27	6.0
1100.0	1089.2	2.813	2.738	34.422	27.483	32.594	69.09	1.258	810.2	1478.61	5.5
1150.0	1138.6	2.757	2.678	34.432	27.496	32.838	68.03	1.292	873.1	1479.20	3.9
1200.0	1188.0	2.691	2.609	34.443	27.510	33.084	66.79	1.326	937.8	1479.75	3.0
1250.0	1237.3	2.613	2.528	34.456	27.527	33.333	65.26	1.359	1004.1	1480.26	3.0
1300.0	1286.7	2.532	2.444	34.470	27.546	33.582	63.60	1.391	1072.0	1480.75	4.1
1350.0	1336.0	2.477	2.386	34.482	27.560	33.827	62.37	1.423	1141.4	1481.35	2.9
1400.0	1385.4	2.424	2.329	34.493	27.573	34.070	61.24	1.454	1212.4	1481.96	3.3
1450.0	1434.7	2.357	2.259	34.506	27.589	34.317	59.80	1.484	1284.8	1482.51	3.0
1500.0	1484.0	2.310	2.209	34.516	27.601	34.559	58.77	1.514	1358.8	1483.14	2.5
1550.0	1533.3	2.270	2.165	34.525	27.612	34.798	57.89	1.543	1434.1	1483.81	3.3
1600.0	1582.6	2.221	2.113	34.535	27.624	35.040	56.83	1.572	1510.9	1484.44	1.8
1650.0	1631.9	2.181	2.069	34.543	27.634	35.279	56.03	1.600	1589.0	1485.10	1.9
1700.0	1681.2	2.142	2.027	34.552	27.644	35.518	55.12	1.628	1668.5	1485.77	1.8
1750.0	1730.5	2.112	1.993	34.559	27.653	35.754	54.49	1.655	1749.4	1486.48	2.0
1800.0	1779.7	2.070	1.947	34.567	27.662	35.993	53.63	1.682	1831.6	1487.14	2.3
1850.0	1829.0	2.043	1.917	34.572	27.669	36.227	53.16	1.709	1915.1	1487.86	2.1
1900.0	1878.2	1.993	1.863	34.582	27.681	36.467	52.05	1.735	1999.8	1488.49	3.0
1950.0	1927.4	1.954	1.821	34.589	27.690	36.704	51.28	1.761	2085.9	1489.16	1.7
2000.0	1976.6	1.926	1.789	34.594	27.696	36.938	50.77	1.786	2173.2	1489.88	2.0
2050.0	2025.8	1.900	1.759	34.599	27.702	37.171	50.29	1.812	2261.7	1490.60	1.7
2100.0	2075.0	1.875	1.730	34.603	27.707	37.403	49.88	1.837	2351.4	1491.34	1.0
2150.0	2124.2	1.853	1.704	34.608	27.713	37.635	49.44	1.862	2442.4	1492.08	1.4
2200.0	2173.4	1.825	1.672	34.613	27.720	37.867	48.92	1.886	2534.5	1492.80	2.2
2250.0	2222.6	1.794	1.638	34.618	27.726	38.100	48.35	1.911	2627.9	1493.51	2.1
2300.0	2271.7	1.768	1.608	34.623	27.732	38.332	47.84	1.935	2722.3	1494.24	1.6
2350.0	2320.9	1.738	1.574	34.628	27.739	38.565	47.28	1.958	2818.0	1494.96	1.7
2400.0	2370.0	1.718	1.550	34.632	27.744	38.795	46.91	1.982	2914.8	1495.72	1.4
2450.0	2419.1	1.706	1.534	34.634	27.746	39.022	46.78	2.005	3012.7	1496.51	1.1
2500.0	2468.2	1.681	1.504	34.638	27.752	39.252	46.34	2.029	3111.8	1497.25	0.7
2550.0	2517.3	1.669	1.488	34.640	27.754	39.479	46.19	2.052	3211.9	1498.04	0.8
2600.0	2566.4	1.648	1.463	34.644	27.759	39.709	45.80	2.075	3313.2	1498.80	0.8
2650.0	2615.5	1.638	1.449	34.645	27.761	39.934	45.75	2.098	3415.6	1499.60	0.6
2700.0	2664.6	1.629	1.435	34.647	27.764	40.160	45.65	2.120	3519.1	1500.41	-0.2
2750.0	2713.6	1.623	1.425	34.649	27.766	40.385	45.59	2.143	3623.7	1501.23	0.3
2800.0	2762.7	1.616	1.413	34.651	27.769	40.609	45.50	2.166	3729.3	1502.05	1.3
2850.0	2811.7	1.597	1.390	34.653	27.772	40.836	45.25	2.189	3836.1	1502.81	0.9
2900.0	2860.7	1.587	1.375	34.655	27.774	41.061	45.12	2.211	3944.0	1503.62	0.8
2950.0	2909.7	1.581	1.365	34.657	27.777	41.285	45.05	2.234	4052.9	1504.45	0.7
3000.0	2958.8	1.567	1.346	34.660	27.780	41.511	44.79	2.256	4162.9	1505.24	0.9
3050.0	3007.8	1.558	1.332	34.661	27.782	41.734	44.73	2.279	4274.0	1506.05	0.2
3100.0	3056.7	1.550	1.320	34.662	27.784	41.957	44.69	2.301	4386.2	1506.87	0.4
3150.0	3105.7	1.543	1.308	34.663	27.785	42.180	44.67	2.323	4499.4	1507.69	0.3
3200.0	3154.7	1.535	1.295	34.665	27.788	42.403	44.55	2.346	4613.7	1508.51	1.0
3250.0	3203.6	1.532	1.287	34.665	27.788	42.624	44.64	2.368	4729.1	1509.35	0.4
3300.0	3252.6	1.528	1.278	34.667	27.791	42.846	44.58	2.390	4845.5	1510.19	0.5
3350.0	3301.5	1.520	1.265	34.669	27.793	43.068	44.48	2.413	4963.1	1511.01	0.6
3400.0	3350.4	1.512	1.253	34.670	27.795	43.290	44.43	2.435	5081.6	1511.83	0.5
3450.0	3399.4	1.507	1.243	34.671	27.796	43.511	44.42	2.457	5201.3	1512.67	-0.2
3500.0	3448.3	1.502	1.233	34.673	27.798	43.732	44.33	2.479	5321.9	1513.50	1.1
3550.0	3497.2	1.496	1.222	34.673	27.799	43.952	44.38	2.501	5443.7	1514.33	0.3
3600.0	3546.0	1.493	1.213	34.674	27.801	44.172	44.41	2.524	5566.5	1515.18	0.3
3650.0	3594.9	1.490	1.205	34.675	27.802	44.392	44.42	2.546	5690.4	1516.03	0.2
3700.0	3643.8	1.487	1.197	34.676	27.803	44.611	44.43	2.568	5815.3	1516.87	0.3
3750.0	3692.6	1.485	1.190	34.676	27.804	44.829	44.54	2.590	5941.3	1517.72	0.1
3800.0	3741.5	1.482	1.181	34.677	27.805	45.048	44.55	2.613	6068.3	1518.57	0.1
3850.0	3790.3	1.481	1.175	34.678	27.806	45.266	44.60	2.635	6196.4	1519.43	0.2
3900.0	3839.1	1.477	1.166	34.679	27.808	45.485	44.58	2.657	6325.6	1520.27	0.8
3950.0	3887.9	1.475	1.158	34.678	27.807	45.702	44.76	2.679	6455.8	1521.12	0.3
4000.0	3936.7	1.474	1.152	34.680	27.809	45.920	44.73	2.702	6587.1	1521.98	0.3
4050.0	3985.5	1.472	1.144	34.681	27.811	46.138	44.75	2.724	6719.5	1522.84	0.1
4100.0	4034.3	1.471	1.138	34.682	27.812	46.355	44.80	2.747	6852.9	1523.70	0.5
4150.0	4083.1	1.470	1.131	34.681	27.812	46.570	44.99	2.769	6987.4	1524.56	0.5
4200.0	4131.8	1.469	1.125	34.682	27.813	46.787	45.03	2.791	7123.0	1525.42	0.1
4250.0	4180.6	1.470	1.120	34.682	27.813	47.002	45.16	2.814	7259.6	1526.29	0.0
4300.0	4229.3	1.469	1.113	34.683	27.814	47.219	45.19	2.837	7397.3	1527.15	0.2
4350.0	4278.0	1.470	1.108	34.684	27.816	47.435	45.26	2.859	7536.0	1528.02	0.1
4400.0	4326.8	1.471	1.104	34.684	27.816	47.649	45.41	2.882	7675.8	1528.89	0.0
4450.0	4375.5	1.474	1.101	34.685	27.817	47.864	45.51	2.905	7816.8	1529.77	0.5
4500.0	4424.2	1.476	1.097	34.685	27.817	48.078	45.66	2.927	7958.7	1530.65	0.6
4550.0	4472.9	1.480	1.095	34.684	27.816	48.291	45.92	2.950	8101.8	1531.53	0.0
4600.0	4521.5	1.482	1.091	34.685	27.817	48.505	46.01	2.973	8246.0	1532.41	0.4
4650.0	4570.2	1.486	1.089	34.684	27.817	48.718	46.27	2.996	8391.2	1533.29	-0.3
4700.0	4618.8	1.488	1.085	34.686	27.819	48.932	46.29	3.019	8537.5	1534.17	0.1
4750.0	4667.5	1.491	1.081	34.686	27.819	49.145	46.46	3.043	8684.9	1535.06	0.5
4800.0	4716.1	1.496	1.080	34.686	27.819	49.357	46.67	3.066	8833.5	1535.95	0.2
4850.0	4764.8	1.501	1.079	34.686	27.819	49.569	46.87	3.089	8983.1	1536.84	0.1
4900.0	4813.4	1.505	1.077	34.686	27.819	49.781	47.06	3.113	9133.8	1537.73	0.0
4950.0	4862.0	1.509	1.074	34.687	27.820	49.993	47.18	3.136	9285.7	1538.62	-0.4
5000.0	4910.6	1.513	1.072	34.687	27.820	50.204	47.37	3.160	9438.6	1539.51	0.6
5050.0	4959.2	1.517	1.070	34.686	27.820	50.415	47.65	3.184	9592.7	1540.39	0.1
5100.0	5007.7	1.523	1.069	34.687	27.820	50.626	47.80	3.207	9747.9	1541.29	0.0
5150.0	5056.3	1.527	1.067	34.687	27.821	50.837	47.99	3.231	9904.2	1542.18	-0.1
5200.0	5104.8	1.533	1.066	34.687	27.821	51.047	48.23	3.255	10061.7	1543.08	0.1
5250.0	5153.4	1.537	1.064	34.687	27.821	51.257	48.42	3.280	10220.3	1543.97	0.0
5300.0	5201.9	1.541	1.061	34.687	27.821	51.467	48.61	3.304	10380.0	1544.86	0.2
5350.0	5250.4	1.545	1.059	34.687	27.821	51.677	48.80	3.328	10540.9	1545.75	0.3
5400.0	5298.9	1.550	1.057	34.687	27.821	51.886	49.02	3.353	10702.9	1546.65	0.0
5450.0	5347.4	1.554	1.054	34.688	27.822	52.096	49.15	3.377	10866.1	1547.54	0.1
5500.0	5395.9	1.560	1.054	34.688	27.822	52.305	49.39	3.402	11030.4	1548.44	0.0

CTD REPORT RAMA-4 STATION: 4 CAST: 1 DN
POSITION: 39DEG 59.4MIN N 151DEG 59.7MIN E DATE: 5 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	17.121	17.121	34.197	24.898	24.898	307.13	0.000	0.0	1512.27	
10.0	9.9	17.125	17.123	34.197	24.897	24.941	307.54	0.031	0.2	1512.44	291.2
20.0	19.8	15.197	15.194	34.405	25.503	25.591	250.24	0.062	0.6	1506.92	481.7
30.0	29.8	13.285	13.281	34.387	25.898	26.031	212.96	0.085	1.3	1500.88	249.1
40.0	39.7	12.868	12.862	34.435	26.019	26.198	201.64	0.106	2.3	1499.71	112.8
50.0	49.6	12.407	12.400	34.461	26.131	26.355	191.28	0.126	3.4	1498.35	102.2
60.0	59.5	11.678	11.670	34.408	26.230	26.500	182.06	0.145	4.8	1495.96	83.5
70.0	69.5	10.823	10.814	34.298	26.302	26.618	175.37	0.162	6.3	1493.00	64.3
80.0	79.4	9.963	9.954	34.180	26.361	26.723	169.91	0.180	8.0	1489.95	69.5
90.0	89.3	9.573	9.563	34.203	26.444	26.852	162.15	0.197	9.9	1488.72	61.2
100.0	99.2	9.064	9.053	34.150	26.486	26.941	158.31	0.213	11.9	1486.95	40.4
110.0	109.1	8.389	8.377	34.065	26.525	27.027	154.63	0.228	14.1	1484.50	32.4
120.0	119.1	8.030	8.018	34.028	26.550	27.099	152.35	0.244	16.4	1483.26	26.3
130.0	129.0	7.533	7.520	33.970	26.577	27.173	149.83	0.259	18.9	1481.45	28.3
140.0	138.9	6.701	6.688	33.859	26.604	27.249	147.15	0.274	21.6	1478.25	19.5
150.0	148.8	6.449	6.436	33.829	26.613	27.305	146.33	0.289	24.4	1477.38	13.4
160.0	158.7	6.279	6.265	33.822	26.630	27.368	144.85	0.303	27.3	1476.86	12.2
170.0	168.7	6.173	6.158	33.814	26.637	27.422	144.26	0.318	30.4	1476.59	10.0
180.0	178.6	5.850	5.835	33.777	26.648	27.480	143.21	0.332	33.6	1475.42	10.9
190.0	188.5	5.692	5.676	33.764	26.657	27.536	142.42	0.346	37.0	1474.93	10.1
200.0	198.4	5.547	5.530	33.755	26.667	27.593	141.50	0.360	40.5	1474.50	13.4
210.0	208.3	5.355	5.338	33.746	26.683	27.656	140.07	0.375	44.1	1473.87	14.9
220.0	218.2	5.147	5.129	33.732	26.696	27.716	138.86	0.388	47.9	1473.17	16.0
230.0	228.2	4.907	4.889	33.720	26.713	27.782	137.17	0.402	51.8	1472.34	13.5
240.0	238.1	4.392	4.374	33.657	26.719	27.837	136.45	0.416	55.9	1470.30	11.3
250.0	248.0	4.566	4.547	33.700	26.734	27.898	135.17	0.430	60.1	1471.23	21.3
260.0	257.9	4.048	4.030	33.665	26.760	27.974	132.48	0.443	64.4	1469.20	15.6
270.0	267.8	4.183	4.164	33.687	26.764	28.023	132.30	0.456	68.8	1469.95	13.0
280.0	277.7	4.300	4.280	33.733	26.789	28.093	130.14	0.469	73.4	1470.66	20.5
290.0	287.6	4.432	4.410	33.775	26.808	28.158	128.50	0.482	78.2	1471.42	19.6
300.0	297.6	4.478	4.456	33.809	26.831	28.226	126.53	0.495	83.0	1471.82	15.7
310.0	307.5	4.400	4.377	33.811	26.840	28.283	125.63	0.508	88.0	1471.66	12.6
320.0	317.4	4.384	4.360	33.828	26.856	28.345	124.29	0.520	93.1	1471.78	15.6
330.0	327.3	4.280	4.256	33.834	26.871	28.408	122.82	0.533	98.3	1471.52	11.8
340.0	337.2	4.248	4.223	33.839	26.879	28.462	122.20	0.545	103.6	1471.55	16.6
350.0	347.1	4.652	4.625	33.931	26.909	28.534	119.78	0.557	109.1	1473.50	16.1
360.0	357.0	4.896	4.868	33.976	26.918	28.587	119.27	0.569	114.7	1474.73	16.8
370.0	366.9	4.749	4.720	33.989	26.945	28.661	116.74	0.581	120.4	1474.30	11.5
380.0	376.8	4.743	4.713	33.982	26.940	28.703	117.28	0.593	126.2	1474.43	19.0
390.0	386.7	4.685	4.655	34.029	26.984	28.793	113.24	0.604	132.1	1474.41	20.5
400.0	396.7	4.804	4.773	34.045	26.983	28.838	113.49	0.616	138.2	1475.09	3.7
410.0	406.6	4.751	4.719	34.048	26.992	28.893	112.77	0.627	144.3	1475.03	16.3
420.0	416.5	4.665	4.632	34.066	27.015	28.964	110.54	0.638	150.6	1474.87	14.3
430.0	426.4	4.666	4.633	34.072	27.020	29.014	110.21	0.649	157.0	1475.04	6.4
440.0	436.3	4.677	4.643	34.084	27.029	29.069	109.54	0.660	163.4	1475.26	10.2
450.0	446.2	4.646	4.611	34.095	27.041	29.127	108.47	0.671	170.0	1475.31	10.3
460.0	456.1	4.641	4.605	34.105	27.049	29.182	107.77	0.682	176.7	1475.47	12.1
470.0	466.0	4.558	4.522	34.113	27.065	29.244	106.33	0.693	183.5	1475.30	15.9
480.0	475.9	4.513	4.476	34.127	27.081	29.307	104.88	0.703	190.5	1475.29	13.8
490.0	485.8	4.493	4.455	34.139	27.092	29.365	103.87	0.714	197.5	1475.38	12.2
500.0	495.7	4.456	4.418	34.150	27.105	29.424	102.72	0.724	204.6	1475.41	11.4
510.0	505.6	4.418	4.379	34.157	27.115	29.481	101.86	0.734	211.8	1475.42	12.2
520.0	515.5	4.353	4.313	34.166	27.129	29.542	100.56	0.744	219.1	1475.33	10.3
530.0	525.4	4.309	4.269	34.167	27.134	29.594	100.09	0.755	226.6	1475.31	8.9
540.0	535.3	4.252	4.211	34.174	27.146	29.652	99.04	0.764	234.1	1475.24	11.1
550.0	545.2	4.197	4.156	34.179	27.155	29.709	98.15	0.774	241.7	1475.18	9.3
560.0	555.1	4.166	4.124	34.185	27.163	29.763	97.43	0.784	249.4	1475.22	7.1
570.0	565.0	4.142	4.099	34.189	27.169	29.815	96.98	0.794	257.2	1475.29	8.8
580.0	574.9	4.109	4.066	34.199	27.181	29.874	95.94	0.804	265.1	1475.33	8.6
590.0	584.8	4.089	4.045	34.203	27.186	29.925	95.52	0.813	273.1	1475.41	5.9
600.0	594.7	4.068	4.023	34.208	27.192	29.978	95.00	0.823	281.2	1475.49	6.7
610.0	604.6	4.049	4.004	34.214	27.199	30.031	94.43	0.832	289.4	1475.58	8.7
620.0	614.5	4.019	3.973	34.223	27.209	30.088	93.52	0.841	297.7	1475.63	10.3
630.0	624.4	3.992	3.945	34.232	27.219	30.144	92.64	0.851	306.1	1475.69	7.8
640.0	634.3	3.973	3.926	34.236	27.224	30.196	92.22	0.860	314.6	1475.78	8.4
650.0	644.2	3.913	3.865	34.242	27.235	30.253	91.20	0.869	323.1	1475.70	12.5
660.0	654.1	3.848	3.800	34.250	27.248	30.313	89.97	0.878	331.8	1475.60	9.4
670.0	664.0	3.750	3.701	34.242	27.251	30.365	89.59	0.887	340.5	1475.34	8.7
680.0	673.9	3.799	3.749	34.265	27.265	30.423	88.49	0.896	349.3	1475.74	10.9
690.0	683.8	3.778	3.728	34.274	27.274	30.479	87.65	0.905	358.2	1475.83	10.0
700.0	693.7	3.746	3.695	34.283	27.284	30.536	86.74	0.914	367.2	1475.87	7.2
710.0	703.6	3.732	3.680	34.286	27.288	30.586	86.44	0.922	376.3	1475.97	6.0
720.0	713.5	3.712	3.660	34.293	27.296	30.640	85.78	0.931	385.5	1476.06	9.7
730.0	723.4	3.678	3.625	34.303	27.307	30.698	84.75	0.940	394.7	1476.09	9.1
740.0	733.3	3.627	3.574	34.304	27.313	30.751	84.19	0.948	404.1	1476.04	8.1
750.0	743.2	3.597	3.543	34.312	27.322	30.807	83.35	0.956	413.5	1476.09	9.2
760.0	753.1	3.548	3.494	34.316	27.330	30.862	82.59	0.965	423.0	1476.05	7.9
770.0	763.0	3.519	3.464	34.321	27.337	30.915	81.99	0.973	432.6	1476.10	7.3
780.0	772.9	3.487	3.431	34.326	27.344	30.969	81.35	0.981	442.3	1476.13	8.7
790.0	782.8	3.476	3.420	34.337	27.354	31.025	80.48	0.989	452.0	1476.26	8.5
800.0	792.6	3.455	3.398	34.343	27.360	31.078	79.88	0.997	461.8	1476.34	6.2
810.0	802.5	3.381	3.324	34.339	27.364	31.129	79.45	1.005	471.7	1476.19	6.5
820.0	812.4	3.332	3.274	34.342	27.371	31.183	78.79	1.013	481.7	1476.15	9.1
830.0	822.3	3.288	3.230	34.349	27.381	31.240	77.86	1.021	491.8	1476.13	7.6
840.0	832.2	3.274	3.215	34.353	27.385	31.291	77.49	1.029	501.9	1476.24	4.4
850.0	842.1	3.261	3.201	34.356	27.389	31.341	77.19	1.036	512.1	1476.35	5.2
860.0	852.0	3.232	3.172	34.360	27.395	31.393	76.66	1.044	522.4	1476.40	6.7
870.0	861.9	3.204	3.143	34.365	27.401	31.447	76.06	1.052	532.8	1476.45	5.4
880.0	871.8	3.199	3.138	34.369	27.405	31.496	75.78	1.059	543.2	1476.59	4.6
890.0	881.6	3.173	3.111	34.372	27.410	31.548	75.34	1.067	553.7	1476.65	4.5
900.0	891.5	3.163	3.100	34.375	27.413	31.597	75.07	1.075	564.3	1476.78	3.4
910.0	901.4	3.155	3.092	34.378	27.416	31.647	74.84	1.082	575.0	1476.91	6.0
920.0	911.3	3.126	3.062	34.385	27.425	31.702	74.06	1.089	585.7	1476.96	8.1
930.0	921.2	3.110	3.045	34.392	27.432	31.755	73.44	1.097	596.5	1477.06	5.6
940.0	931.1	3.090	3.025	34.394	27.435	31.805	73.15	1.104	607.4	1477.14	4.1
950.0	941.0	3.074	3.008	34.397	27.439	31.855	72.81	1.111	618.3	1477.24	4.8
960.0	950.9	3.055	2.988	34.401	27.444	31.907	72.37	1.119	629.4	1477.33	5.6
970.0	960.7	3.024	2.957	34.404	27.449	31.959	71.88	1.126	640.5	1477.36	5.6

CTD REPORT RAMA-4 STATION: 4 CAST: 1 DN
POSITION: 39DEG 59.4MIN N 151DEG 59.7MIN E DATE: 5 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	2.999	2.931	34.407	27.454	32.010	71.45	1.133	651.6	1477.42	4.4
990.0	980.5	2.981	2.913	34.409	27.457	32.059	71.19	1.140	662.9	1477.51	4.6
1000.0	990.4	2.960	2.891	34.413	27.462	32.111	70.73	1.147	674.2	1477.59	5.5
1050.0	1039.8	2.859	2.787	34.425	27.481	32.362	69.06	1.182	731.7	1477.99	2.4
1100.0	1089.2	2.777	2.702	34.439	27.499	32.612	67.44	1.216	791.0	1478.48	4.7
1150.0	1138.6	2.704	2.626	34.450	27.514	32.859	66.14	1.250	851.9	1479.00	3.6
1200.0	1188.0	2.622	2.541	34.464	27.533	33.109	64.48	1.283	914.4	1479.48	4.9
1250.0	1237.3	2.554	2.470	34.475	27.547	33.354	63.20	1.314	978.5	1480.03	2.3
1300.0	1286.7	2.504	2.416	34.482	27.557	33.595	62.42	1.346	1044.2	1480.64	2.8
1350.0	1336.0	2.435	2.344	34.493	27.572	33.840	61.11	1.377	1111.3	1481.18	2.5
1400.0	1385.4	2.370	2.276	34.505	27.587	34.086	59.75	1.407	1180.0	1481.74	4.3
1450.0	1434.7	2.322	2.224	34.515	27.599	34.328	58.73	1.437	1250.2	1482.37	1.7
1500.0	1484.0	2.276	2.175	34.525	27.611	34.570	57.72	1.466	1321.7	1483.01	3.7
1550.0	1533.3	2.226	2.122	34.535	27.623	34.812	56.66	1.494	1394.7	1483.63	3.5
1600.0	1582.6	2.175	2.067	34.545	27.636	35.053	55.58	1.522	1469.1	1484.25	2.4
1650.0	1631.9	2.150	2.039	34.551	27.643	35.289	55.09	1.550	1544.8	1484.97	1.6
1700.0	1681.2	2.124	2.009	34.557	27.650	35.524	54.55	1.578	1621.8	1485.70	1.9
1750.0	1730.5	2.095	1.976	34.562	27.656	35.759	54.09	1.605	1700.2	1486.41	1.4
1800.0	1779.7	2.057	1.935	34.568	27.664	35.995	53.42	1.632	1779.9	1487.08	1.9
1850.0	1829.0	2.023	1.897	34.574	27.672	36.231	52.77	1.658	1860.9	1487.77	2.2
1900.0	1878.2	1.988	1.858	34.580	27.680	36.466	52.13	1.684	1943.2	1488.46	3.0
1950.0	1927.4	1.948	1.815	34.589	27.690	36.705	51.21	1.710	2026.7	1489.13	2.5
2000.0	1976.6	1.920	1.783	34.594	27.696	36.938	50.71	1.736	2111.5	1489.85	1.6
2050.0	2025.8	1.897	1.756	34.598	27.702	37.170	50.32	1.761	2197.5	1490.59	1.9
2100.0	2075.0	1.871	1.726	34.604	27.709	37.404	49.77	1.786	2284.8	1491.32	1.1
2150.0	2124.2	1.843	1.694	34.609	27.715	37.637	49.25	1.811	2373.2	1492.04	1.1
2200.0	2173.4	1.820	1.667	34.612	27.719	37.867	48.92	1.835	2462.9	1492.78	1.6
2250.0	2222.6	1.798	1.642	34.617	27.725	38.099	48.48	1.859	2553.7	1493.53	1.3
2300.0	2271.7	1.776	1.616	34.621	27.730	38.330	48.08	1.884	2645.7	1494.28	1.1
2350.0	2320.9	1.746	1.582	34.626	27.737	38.562	47.53	1.908	2738.8	1494.99	1.7
2400.0	2370.0	1.714	1.546	34.631	27.743	38.795	46.93	1.931	2833.1	1495.70	1.1
2450.0	2419.1	1.694	1.522	34.635	27.748	39.025	46.55	1.954	2928.5	1496.46	1.4
2500.0	2468.2	1.681	1.504	34.636	27.750	39.251	46.48	1.978	3025.1	1497.24	0.4
2550.0	2517.3	1.663	1.482	34.640	27.755	39.480	46.12	2.001	3122.7	1498.01	1.1
2600.0	2566.4	1.647	1.462	34.643	27.759	39.708	45.85	2.024	3221.5	1498.79	0.5
2650.0	2615.5	1.635	1.446	34.645	27.761	39.934	45.72	2.047	3321.4	1499.59	0.9
2700.0	2664.6	1.622	1.428	34.647	27.764	40.161	45.55	2.070	3422.4	1500.38	0.5
2750.0	2713.6	1.608	1.410	34.650	27.768	40.388	45.31	2.092	3524.5	1501.16	0.3
2800.0	2762.7	1.597	1.395	34.652	27.771	40.613	45.18	2.115	3627.7	1501.97	0.7
2850.0	2811.7	1.588	1.381	34.654	27.773	40.838	45.06	2.137	3731.9	1502.78	0.8
2900.0	2860.7	1.580	1.368	34.655	27.775	41.062	45.03	2.160	3837.2	1503.59	0.5
2950.0	2909.7	1.569	1.353	34.658	27.778	41.288	44.81	2.182	3943.7	1504.39	0.8
3000.0	2958.8	1.559	1.338	34.658	27.779	41.510	44.82	2.205	4051.2	1505.20	0.3
3050.0	3007.8	1.548	1.323	34.662	27.784	41.736	44.51	2.227	4159.7	1506.01	0.5
3100.0	3056.7	1.538	1.308	34.663	27.785	41.960	44.45	2.249	4269.4	1506.82	0.9
3150.0	3105.7	1.534	1.299	34.664	27.787	42.182	44.48	2.272	4380.1	1507.65	0.3
3200.0	3154.7	1.528	1.288	34.665	27.788	42.404	44.45	2.294	4491.8	1508.48	0.2
3250.0	3203.6	1.520	1.276	34.666	27.790	42.626	44.41	2.316	4604.7	1509.30	1.1
3300.0	3252.6	1.514	1.265	34.668	27.792	42.849	44.32	2.338	4718.5	1510.13	0.7
3350.0	3301.5	1.507	1.253	34.669	27.794	43.070	44.30	2.360	4833.5	1510.95	0.1
3400.0	3350.4	1.503	1.244	34.670	27.795	43.291	44.30	2.382	4949.5	1511.79	0.2
3450.0	3399.4	1.497	1.233	34.671	27.797	43.512	44.26	2.405	5066.6	1512.62	0.6
3500.0	3448.3	1.491	1.222	34.673	27.799	43.734	44.18	2.427	5184.7	1513.46	0.7
3550.0	3497.2	1.487	1.213	34.674	27.801	43.954	44.19	2.449	5303.9	1514.30	0.2
3600.0	3546.0	1.482	1.203	34.675	27.802	44.175	44.16	2.471	5424.1	1515.13	0.9
3650.0	3594.9	1.479	1.194	34.675	27.803	44.393	44.25	2.493	5545.4	1515.98	0.2
3700.0	3643.8	1.473	1.183	34.676	27.804	44.613	44.21	2.515	5667.8	1516.81	0.3
3750.0	3692.6	1.472	1.177	34.677	27.805	44.832	44.26	2.537	5791.2	1517.67	0.2
3800.0	3741.5	1.471	1.171	34.677	27.806	45.050	44.38	2.559	5915.6	1518.52	0.4
3850.0	3790.3	1.469	1.163	34.679	27.808	45.269	44.35	2.582	6041.1	1519.38	0.2
3900.0	3839.1	1.468	1.157	34.680	27.809	45.487	44.38	2.604	6167.7	1520.24	0.2
3950.0	3887.9	1.466	1.150	34.680	27.810	45.705	44.49	2.626	6295.3	1521.09	-0.3
4000.0	3936.7	1.466	1.144	34.681	27.811	45.922	44.54	2.648	6424.0	1521.95	0.4
4050.0	3985.5	1.466	1.138	34.681	27.811	46.139	44.66	2.671	6553.7	1522.81	0.0
4100.0	4034.3	1.465	1.132	34.681	27.812	46.355	44.78	2.693	6684.5	1523.67	0.6
4150.0	4083.1	1.465	1.126	34.681	27.812	46.571	44.91	2.715	6816.4	1524.54	-0.3
4200.0	4131.8	1.464	1.120	34.683	27.814	46.789	44.86	2.738	6949.3	1525.40	0.3
4250.0	4180.6	1.464	1.114	34.683	27.814	47.004	44.98	2.760	7083.3	1526.26	-0.1
4300.0	4229.3	1.466	1.110	34.684	27.815	47.220	45.07	2.783	7218.4	1527.14	0.0
4350.0	4278.0	1.468	1.106	34.684	27.816	47.435	45.23	2.805	7354.5	1528.01	0.2
4400.0	4326.8	1.469	1.102	34.684	27.816	47.650	45.37	2.828	7491.7	1528.88	-0.6
4450.0	4375.5	1.471	1.098	34.684	27.816	47.864	45.54	2.851	7630.0	1529.76	-0.3
4500.0	4424.2	1.472	1.093	34.685	27.817	48.079	45.60	2.873	7769.4	1530.63	0.5
4550.0	4472.9	1.476	1.091	34.684	27.817	48.292	45.86	2.896	7909.8	1531.51	0.5
4600.0	4521.5	1.478	1.087	34.685	27.818	48.506	45.96	2.919	8051.3	1532.39	0.0
4650.0	4570.2	1.482	1.085	34.685	27.818	48.719	46.15	2.942	8193.9	1533.28	-0.2
4700.0	4618.8	1.485	1.082	34.686	27.819	48.933	46.23	2.965	8337.6	1534.16	0.0
4750.0	4667.5	1.489	1.079	34.686	27.819	49.145	46.42	2.988	8482.4	1535.05	-0.3
4800.0	4716.1	1.494	1.078	34.686	27.819	49.357	46.63	3.012	8628.3	1535.94	0.0
4850.0	4764.8	1.498	1.076	34.686	27.819	49.569	46.83	3.035	8775.3	1536.83	0.6
4900.0	4813.4	1.502	1.074	34.686	27.819	49.781	47.03	3.058	8923.4	1537.72	0.1
4950.0	4862.0	1.505	1.070	34.687	27.820	49.994	47.12	3.082	9072.6	1538.60	0.5
5000.0	4910.6	1.510	1.069	34.687	27.820	50.205	47.33	3.106	9222.9	1539.49	0.0
5050.0	4959.2	1.515	1.068	34.687	27.821	50.416	47.53	3.129	9374.3	1540.39	0.1
5100.0	5007.7	1.519	1.065	34.687	27.821	50.627	47.73	3.153	9526.9	1541.28	0.1
5150.0	5056.3	1.524	1.064	34.687	27.821	50.837	47.95	3.177	9680.6	1542.17	0.6
5200.0	5104.8	1.529	1.062	34.687	27.821	51.048	48.15	3.201	9835.4	1543.06	0.1
5250.0	5153.4	1.534	1.061	34.687	27.821	51.258	48.36	3.225	9991.3	1543.96	0.1
5300.0	5201.9	1.539	1.059	34.687	27.821	51.467	48.58	3.249	10148.4	1544.85	-0.1
5350.0	5250.4	1.544	1.058	34.687	27.821	51.677	48.79	3.274	10306.7	1545.75	0.1

CTD REPORT RAMA-4 STATION: 5 CAST: 2 DN
POSITION: 38DEG 58.1MIN N 152DEG 2.6MIN E DATE: 5 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	20.123	20.123	34.544	24.405	24.405	354.08	0.000	0.0	1521.29	
10.0	9.9	20.054	20.052	34.536	24.418	24.461	353.26	0.035	0.2	1521.26	103.9
20.0	19.8	18.746	18.742	34.357	24.621	24.708	334.31	0.071	0.7	1517.54	191.1
30.0	29.8	18.047	18.042	34.381	24.814	24.946	316.20	0.103	1.6	1515.71	208.6
40.0	39.7	17.321	17.314	34.461	25.053	25.229	293.77	0.134	2.7	1513.82	347.2
50.0	49.6	15.817	15.809	34.627	25.535	25.755	248.27	0.162	4.2	1509.61	312.6
60.0	59.5	14.866	14.857	34.566	25.701	25.967	232.66	0.186	5.9	1506.71	116.0
70.0	69.5	14.377	14.367	34.522	25.774	26.084	226.01	0.209	7.9	1505.26	60.5
80.0	79.4	13.992	13.980	34.482	25.825	26.181	221.37	0.231	10.1	1504.13	92.8
90.0	89.3	13.347	13.334	34.488	25.965	26.366	208.34	0.253	12.5	1502.19	96.8
100.0	99.2	13.106	13.092	34.502	26.025	26.471	202.88	0.274	15.1	1501.57	68.1
110.0	109.1	12.678	12.663	34.494	26.105	26.596	195.49	0.294	17.9	1500.29	61.6
120.0	119.1	12.385	12.369	34.479	26.151	26.688	191.32	0.313	20.9	1499.44	67.5
130.0	129.0	11.572	11.555	34.395	26.242	26.825	182.77	0.332	24.1	1496.72	69.6
140.0	138.9	11.161	11.143	34.362	26.292	26.922	178.11	0.350	27.5	1495.41	49.4
150.0	148.8	10.765	10.747	34.333	26.342	27.017	173.58	0.367	31.1	1494.14	48.5
160.0	158.7	10.244	10.225	34.277	26.390	27.112	169.09	0.385	34.8	1492.38	38.4
170.0	168.7	9.878	9.858	34.233	26.418	27.187	166.48	0.402	38.7	1491.17	29.0
180.0	178.6	9.386	9.366	34.164	26.446	27.263	163.84	0.418	42.7	1489.46	31.1
190.0	188.5	8.901	8.880	34.105	26.478	27.342	160.83	0.434	47.0	1487.76	26.4
200.0	198.4	8.606	8.585	34.070	26.497	27.408	159.10	0.450	51.4	1486.78	22.6
210.0	208.3	8.434	8.412	34.069	26.523	27.480	156.80	0.466	55.9	1486.29	25.8
220.0	218.2	7.830	7.808	33.984	26.546	27.552	154.44	0.482	60.6	1484.07	21.9
230.0	228.2	7.572	7.549	33.958	26.563	27.616	152.87	0.497	65.5	1483.21	14.2
240.0	238.1	7.338	7.315	33.928	26.573	27.673	152.00	0.512	70.5	1482.43	23.4
250.0	248.0	7.281	7.257	33.965	26.610	27.756	148.63	0.527	75.6	1482.42	24.1
260.0	257.9	7.289	7.264	33.982	26.622	27.814	147.62	0.542	80.9	1482.64	16.7
270.0	267.8	7.170	7.144	33.988	26.644	27.881	145.71	0.557	86.4	1482.35	20.0
280.0	277.7	7.196	7.169	34.017	26.663	27.946	144.05	0.571	92.0	1482.65	22.4
290.0	287.6	6.505	6.479	33.927	26.685	28.019	141.67	0.586	97.7	1480.00	18.0
300.0	297.6	6.627	6.599	33.961	26.696	28.075	140.86	0.600	103.6	1480.68	14.9
310.0	307.5	7.210	7.180	34.093	26.721	28.141	139.07	0.614	109.6	1483.28	20.7
320.0	317.4	7.241	7.210	34.127	26.744	28.209	137.14	0.628	115.7	1483.61	19.0
330.0	327.3	7.168	7.136	34.135	26.760	28.272	135.68	0.641	122.0	1483.50	19.8
340.0	337.2	7.011	6.978	34.136	26.783	28.341	133.62	0.655	128.5	1483.05	23.8
350.0	347.1	6.836	6.803	34.136	26.807	28.412	131.37	0.668	135.0	1482.53	17.9
360.0	357.0	6.711	6.677	34.128	26.817	28.469	130.44	0.681	141.7	1482.19	8.0
370.0	366.9	6.605	6.571	34.115	26.821	28.520	130.13	0.694	148.5	1481.92	12.5
380.0	376.8	6.361	6.326	34.098	26.839	28.586	128.32	0.707	155.5	1481.10	18.3
390.0	386.7	6.042	6.007	34.064	26.853	28.649	126.86	0.720	162.5	1479.96	20.3
400.0	396.7	5.730	5.696	34.043	26.875	28.720	124.63	0.732	169.7	1478.84	17.5
410.0	406.6	5.489	5.454	34.017	26.883	28.777	123.73	0.745	177.0	1478.00	14.1
420.0	416.5	5.330	5.295	34.014	26.900	28.841	122.15	0.757	184.5	1477.52	8.2
430.0	426.4	5.481	5.445	34.037	26.900	28.885	122.38	0.769	192.0	1478.32	17.8
440.0	436.3	5.566	5.529	34.099	26.939	28.969	118.94	0.781	199.7	1478.91	26.3
450.0	446.2	5.409	5.371	34.094	26.954	29.032	117.50	0.793	207.5	1478.43	14.1
460.0	456.1	5.176	5.138	34.072	26.964	29.090	116.44	0.805	215.4	1477.62	15.9
470.0	466.0	5.017	4.979	34.072	26.982	29.156	114.66	0.817	223.5	1477.13	13.1
480.0	475.9	5.138	5.099	34.100	26.990	29.209	114.12	0.828	231.6	1477.82	10.7
490.0	485.8	5.225	5.184	34.133	27.007	29.270	112.82	0.839	239.9	1478.38	13.9
500.0	495.7	5.256	5.214	34.155	27.021	29.329	111.68	0.851	248.2	1478.70	11.8
510.0	505.6	5.078	5.036	34.140	27.029	29.386	110.77	0.862	256.7	1478.12	13.4
520.0	515.5	4.977	4.935	34.145	27.045	29.449	109.30	0.873	265.3	1477.87	16.0
530.0	525.4	4.931	4.888	34.158	27.060	29.511	107.90	0.884	274.0	1477.86	15.6
540.0	535.3	5.105	5.061	34.206	27.079	29.573	106.51	0.894	282.8	1478.80	15.6
550.0	545.2	5.014	4.969	34.212	27.094	29.635	105.08	0.905	291.7	1478.60	16.3
560.0	555.1	4.835	4.790	34.205	27.108	29.698	103.58	0.915	300.7	1478.02	14.8
570.0	565.0	4.785	4.739	34.214	27.121	29.757	102.44	0.926	309.8	1477.99	12.8
580.0	574.9	4.642	4.596	34.208	27.132	29.816	101.32	0.936	319.1	1477.55	13.6
590.0	584.8	4.495	4.449	34.204	27.145	29.877	100.02	0.946	328.4	1477.10	10.7
600.0	594.7	4.445	4.398	34.205	27.151	29.930	99.46	0.956	337.8	1477.06	9.3
610.0	604.6	4.406	4.359	34.214	27.162	29.988	98.43	0.966	347.3	1477.07	11.3
620.0	614.5	4.299	4.252	34.212	27.172	30.046	97.47	0.976	356.9	1476.79	7.4
630.0	624.4	4.274	4.226	34.213	27.175	30.096	97.20	0.985	366.6	1476.85	10.4
640.0	634.3	4.149	4.101	34.216	27.190	30.159	95.67	0.995	376.4	1476.49	13.3
650.0	644.2	4.112	4.063	34.223	27.200	30.215	94.81	1.005	386.3	1476.51	7.5
660.0	654.1	4.081	4.031	34.225	27.205	30.266	94.41	1.014	396.3	1476.55	6.9
670.0	664.0	4.048	3.998	34.231	27.213	30.321	93.69	1.024	406.4	1476.58	8.3
680.0	673.9	4.027	3.976	34.238	27.221	30.375	93.01	1.033	416.6	1476.66	8.2
690.0	683.8	3.989	3.938	34.243	27.228	30.430	92.29	1.042	426.8	1476.67	9.0
700.0	693.7	3.955	3.903	34.250	27.237	30.485	91.48	1.051	437.2	1476.70	9.7
710.0	703.6	3.902	3.849	34.255	27.247	30.542	90.61	1.060	447.6	1476.65	10.7
720.0	713.5	3.842	3.789	34.261	27.257	30.600	89.59	1.069	458.2	1476.57	10.8
730.0	723.4	3.810	3.756	34.269	27.267	30.656	88.72	1.078	468.8	1476.61	9.7
740.0	733.3	3.776	3.722	34.276	27.276	30.711	87.89	1.087	479.5	1476.64	10.1
750.0	743.2	3.736	3.681	34.284	27.286	30.768	86.94	1.096	490.3	1476.64	9.0
760.0	753.1	3.708	3.653	34.289	27.293	30.822	86.34	1.105	501.2	1476.69	8.4
770.0	763.0	3.670	3.614	34.296	27.302	30.878	85.48	1.113	512.2	1476.70	6.9
780.0	772.9	3.656	3.599	34.299	27.306	30.928	85.20	1.122	523.2	1476.81	5.3
790.0	782.8	3.634	3.577	34.304	27.312	30.980	84.65	1.130	534.4	1476.89	5.6
800.0	792.6	3.629	3.571	34.309	27.317	31.031	84.30	1.139	545.6	1477.04	5.6
810.0	802.5	3.625	3.566	34.317	27.324	31.084	83.74	1.147	556.9	1477.19	9.6
820.0	812.4	3.576	3.517	34.326	27.336	31.143	82.62	1.155	568.3	1477.16	8.9
830.0	822.3	3.571	3.511	34.332	27.341	31.194	82.19	1.164	579.8	1477.31	5.2
840.0	832.2	3.554	3.493	34.336	27.346	31.245	81.79	1.172	591.3	1477.41	7.0
850.0	842.1	3.513	3.452	34.341	27.354	31.300	81.04	1.180	602.9	1477.40	9.4
860.0	852.0	3.465	3.403	34.347	27.363	31.356	80.16	1.188	614.6	1477.37	7.3
870.0	861.9	3.386	3.324	34.341	27.366	31.407	79.80	1.196	626.4	1477.19	5.8
880.0	871.8	3.331	3.269	34.342	27.372	31.460	79.20	1.204	638.3	1477.12	6.8
890.0	881.6	3.307	3.244	34.347	27.378	31.513	78.64	1.212	650.2	1477.19	6.5
900.0	891.5	3.279	3.215	34.351	27.384	31.565	78.11	1.220	662.3	1477.24	7.1
910.0	901.4	3.246	3.182	34.356	27.391	31.619	77.45	1.228	674.4	1477.27	7.4
920.0	911.3	3.219	3.154	34.361	27.397	31.672	76.85	1.235	686.5	1477.32	7.1
930.0	921.2	3.190	3.125	34.366	27.404	31.725	76.23	1.243	698.8	1477.37	5.8
940.0	931.1	3.166	3.100	34.368	27.408	31.776	75.89	1.251	711.1	1477.43	6.2
950.0	941.0	3.123	3.057	34.372	27.415	31.830	75.20	1.258	723.5	1477.42	6.6
960.0	950.9	3.103	3.036	34.376	27.420	31.881	74.74	1.266	736.0	1477.50	4.9
970.0	960.7	3.081	3.014	34.378	27.423	31.931	74.42	1.273	748.5	1477.57	5.4

CTD REPORT RAMA-4 STATION: 5 CAST: 2 DN
POSITION: 38DEG 58.1MIN N 152DEG 2.6MIN E DATE: 5 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.052	2.984	34.382	27.429	31.984	73.89	1.281	761.2	1477.62	4.9
990.0	980.5	3.042	2.973	34.385	27.433	32.033	73.62	1.288	773.8	1477.74	5.1
1000.0	990.4	3.029	2.960	34.392	27.439	32.086	73.03	1.295	786.6	1477.86	6.4
1050.0	1039.8	2.914	2.842	34.407	27.462	32.341	70.99	1.331	851.5	1478.21	6.5
1100.0	1089.2	2.815	2.740	34.422	27.482	32.594	69.11	1.366	918.1	1478.62	2.3
1150.0	1138.6	2.738	2.660	34.440	27.504	32.847	67.23	1.400	986.5	1479.13	5.5
1200.0	1188.0	2.656	2.574	34.454	27.522	33.097	65.60	1.434	1056.4	1479.62	3.8
1250.0	1237.3	2.601	2.516	34.462	27.533	33.339	64.68	1.466	1128.0	1480.21	3.5
1300.0	1286.7	2.528	2.440	34.473	27.548	33.585	63.35	1.498	1201.2	1480.73	4.2
1350.0	1336.0	2.464	2.373	34.485	27.563	33.831	62.00	1.529	1275.9	1481.30	2.4
1400.0	1385.4	2.404	2.309	34.498	27.579	34.077	60.64	1.560	1352.1	1481.88	3.7
1450.0	1434.7	2.355	2.257	34.512	27.594	34.322	59.32	1.590	1429.8	1482.51	3.4
1500.0	1484.0	2.311	2.210	34.521	27.605	34.562	58.41	1.619	1508.9	1483.15	2.7
1550.0	1533.3	2.270	2.165	34.530	27.616	34.802	57.53	1.648	1589.5	1483.81	2.2
1600.0	1582.6	2.220	2.112	34.540	27.628	35.044	56.45	1.677	1671.4	1484.44	3.6
1650.0	1631.9	2.164	2.052	34.550	27.641	35.286	55.31	1.705	1754.8	1485.03	2.8
1700.0	1681.2	2.122	2.007	34.559	27.651	35.526	54.38	1.732	1839.5	1485.69	2.6
1750.0	1730.5	2.084	1.965	34.565	27.659	35.762	53.74	1.760	1925.5	1486.37	2.4
1800.0	1779.7	2.049	1.927	34.570	27.666	35.998	53.17	1.786	2012.8	1487.05	2.0
1850.0	1829.0	2.010	1.884	34.578	27.676	36.235	52.33	1.813	2101.4	1487.72	2.5
1900.0	1878.2	1.976	1.846	34.584	27.684	36.471	51.70	1.839	2191.3	1488.41	1.6
1950.0	1927.4	1.934	1.801	34.592	27.693	36.709	50.83	1.864	2282.4	1489.07	1.7
2000.0	1976.6	1.903	1.766	34.597	27.700	36.943	50.28	1.890	2374.8	1489.78	0.9
2050.0	2025.8	1.875	1.734	34.602	27.706	37.176	49.77	1.915	2468.4	1490.50	1.7
2100.0	2075.0	1.853	1.709	34.606	27.711	37.408	49.40	1.939	2563.2	1491.24	1.5
2150.0	2124.2	1.828	1.680	34.611	27.718	37.640	48.91	1.964	2659.2	1491.98	2.0
2200.0	2173.4	1.808	1.656	34.615	27.722	37.871	48.57	1.988	2756.3	1492.73	1.3
2250.0	2222.6	1.776	1.620	34.620	27.729	38.104	47.99	2.012	2854.7	1493.44	1.6
2300.0	2271.7	1.754	1.594	34.625	27.735	38.336	47.52	2.036	2954.2	1494.19	1.3
2350.0	2320.9	1.730	1.566	34.629	27.740	38.567	47.11	2.060	3054.8	1494.93	1.7
2400.0	2370.0	1.707	1.539	34.632	27.744	38.797	46.77	2.084	3156.6	1495.67	1.8
2450.0	2419.1	1.687	1.515	34.636	27.749	39.026	46.40	2.107	3259.5	1496.43	1.6
2500.0	2468.2	1.670	1.494	34.639	27.753	39.255	46.12	2.130	3363.5	1497.20	0.8
2550.0	2517.3	1.654	1.473	34.643	27.758	39.484	45.78	2.153	3468.7	1497.98	1.4
2600.0	2566.4	1.644	1.459	34.644	27.760	39.709	45.74	2.176	3574.9	1498.78	0.5
2650.0	2615.5	1.626	1.437	34.648	27.764	39.938	45.38	2.198	3682.3	1499.55	1.0
2700.0	2664.6	1.614	1.421	34.650	27.767	40.164	45.23	2.221	3790.7	1500.34	0.7
2750.0	2713.6	1.605	1.407	34.651	27.769	40.389	45.19	2.244	3900.2	1501.15	0.7
2800.0	2762.7	1.596	1.394	34.653	27.771	40.614	45.08	2.266	4010.8	1501.96	0.7
2850.0	2811.7	1.584	1.377	34.656	27.775	40.840	44.86	2.289	4122.5	1502.76	1.0
2900.0	2860.7	1.570	1.359	34.658	27.778	41.066	44.67	2.311	4235.3	1503.55	0.7
2950.0	2909.7	1.559	1.343	34.659	27.780	41.290	44.60	2.334	4349.1	1504.35	0.8
3000.0	2958.8	1.557	1.336	34.660	27.781	41.512	44.64	2.356	4464.0	1505.19	0.2
3050.0	3007.8	1.552	1.327	34.660	27.782	41.734	44.72	2.378	4580.0	1506.02	0.4
3100.0	3056.7	1.542	1.312	34.664	27.786	41.960	44.44	2.400	4697.0	1506.84	0.3
3150.0	3105.7	1.534	1.299	34.664	27.787	42.182	44.48	2.423	4815.1	1507.65	0.7
3200.0	3154.7	1.528	1.288	34.666	27.789	42.405	44.37	2.445	4934.3	1508.48	0.5
3250.0	3203.6	1.524	1.279	34.667	27.790	42.626	44.39	2.467	5054.5	1509.32	0.7
3300.0	3252.6	1.517	1.268	34.668	27.792	42.848	44.37	2.489	5175.8	1510.14	1.1
3350.0	3301.5	1.511	1.257	34.668	27.793	43.069	44.42	2.512	5298.1	1510.97	0.3
3400.0	3350.4	1.505	1.246	34.670	27.795	43.291	44.32	2.534	5421.5	1511.80	0.7
3450.0	3399.4	1.503	1.239	34.671	27.796	43.511	44.36	2.556	5546.0	1512.65	-0.6
3500.0	3448.3	1.499	1.230	34.671	27.797	43.731	44.43	2.578	5671.5	1513.49	-0.6
3550.0	3497.2	1.495	1.221	34.673	27.799	43.952	44.37	2.600	5798.1	1514.33	0.4
3600.0	3546.0	1.491	1.211	34.674	27.801	44.172	44.37	2.622	5925.7	1515.17	0.6
3650.0	3594.9	1.487	1.202	34.675	27.802	44.392	44.37	2.645	6054.4	1516.01	0.2
3700.0	3643.8	1.487	1.197	34.675	27.802	44.610	44.50	2.667	6184.2	1516.87	0.0
3750.0	3692.6	1.482	1.187	34.677	27.805	44.830	44.42	2.689	6315.0	1517.71	0.2
3800.0	3741.5	1.481	1.180	34.676	27.804	45.048	44.60	2.711	6446.9	1518.56	-0.4
3850.0	3790.3	1.478	1.172	34.677	27.806	45.266	44.61	2.734	6579.8	1519.41	0.3
3900.0	3839.1	1.476	1.165	34.678	27.807	45.485	44.64	2.756	6713.8	1520.27	0.2
3950.0	3887.9	1.477	1.160	34.678	27.807	45.701	44.80	2.778	6848.9	1521.13	0.2
4000.0	3936.7	1.476	1.154	34.678	27.808	45.918	44.91	2.801	6985.0	1521.99	0.1
4050.0	3985.5	1.475	1.147	34.680	27.810	46.136	44.87	2.823	7122.2	1522.85	0.7
4100.0	4034.3	1.473	1.140	34.680	27.810	46.353	44.97	2.846	7260.4	1523.71	0.2
4150.0	4083.1	1.473	1.134	34.681	27.811	46.570	45.03	2.868	7399.7	1524.57	0.6
4200.0	4131.8	1.474	1.129	34.681	27.812	46.785	45.17	2.891	7540.1	1525.44	0.4
4250.0	4180.6	1.474	1.124	34.681	27.812	47.001	45.29	2.913	7681.6	1526.30	0.2
4300.0	4229.3	1.475	1.119	34.682	27.813	47.217	45.36	2.936	7824.1	1527.17	1.0
4350.0	4278.0	1.477	1.115	34.683	27.814	47.432	45.45	2.959	7967.7	1528.05	0.1
4400.0	4326.8	1.479	1.111	34.683	27.815	47.647	45.61	2.981	8112.4	1528.93	0.2
4450.0	4375.5	1.483	1.109	34.682	27.814	47.860	45.87	3.004	8258.2	1529.81	0.1
4500.0	4424.2	1.484	1.104	34.683	27.815	48.075	45.94	3.027	8405.0	1530.68	0.2
4550.0	4472.9	1.485	1.100	34.683	27.815	48.289	46.07	3.050	8552.9	1531.55	0.5
4600.0	4521.5	1.488	1.096	34.683	27.815	48.503	46.25	3.073	8702.0	1532.43	0.1
4650.0	4570.2	1.491	1.093	34.684	27.816	48.717	46.36	3.096	8852.1	1533.32	0.1
4700.0	4618.8	1.491	1.087	34.684	27.817	48.930	46.48	3.120	9003.3	1534.19	0.1
4750.0	4667.5	1.493	1.083	34.684	27.817	49.143	46.63	3.143	9155.6	1535.06	-0.2
4800.0	4716.1	1.496	1.080	34.684	27.817	49.355	46.81	3.166	9309.0	1535.95	-0.3
4850.0	4764.8	1.499	1.077	34.684	27.818	49.568	46.99	3.190	9463.5	1536.83	0.0
4900.0	4813.4	1.502	1.074	34.684	27.818	49.780	47.16	3.213	9619.1	1537.71	0.5
4950.0	4862.0	1.506	1.071	34.685	27.819	49.992	47.28	3.237	9775.8	1538.60	0.1
5000.0	4910.6	1.510	1.069	34.685	27.819	50.204	47.46	3.261	9933.7	1539.49	0.1
5050.0	4959.2	1.514	1.067	34.685	27.819	50.415	47.66	3.284	10092.6	1540.38	-0.1
5100.0	5007.7	1.519	1.065	34.685	27.819	50.625	47.86	3.308	10252.7	1541.27	0.0
5150.0	5056.3	1.522	1.062	34.686	27.820	50.837	47.98	3.332	10413.9	1542.16	-0.4
5200.0	5104.8	1.525	1.058	34.686	27.820	51.048	48.15	3.356	10576.3	1543.05	0.1
5250.0	5153.4	1.530	1.057	34.685	27.820	51.257	48.43	3.380	10739.8	1543.94	0.5
5300.0	5201.9	1.533	1.053	34.685	27.820	51.467	48.60	3.405	10904.4	1544.83	-0.1
5350.0	5250.4	1.538	1.052	34.686	27.821	51.677	48.76	3.429	11070.2	1545.72	0.0
5400.0	5298.9	1.540	1.047	34.687	27.822	51.888	48.84	3.453	11237.1	1546.61	0.5
5450.0	5347.4	1.545	1.046	34.687	27.822	52.097	49.04	3.478	11405.1	1547.50	-0.4
5500.0	5395.9	1.551	1.045	34.687	27.822	52.306	49.29	3.502	11574.3	1548.40	0.0
5550.0	5444.4	1.557	1.044	34.688	27.823	52.515	49.45	3.527	11744.7	1549.31	0.7
5600.0	5492.9	1.563	1.043	34.689	27.824	52.724	49.61	3.552	11916.2	1550.21	0.0
5650.0	5541.3	1.568	1.041	34.690	27.825	52.933	49.76	3.577	12088.9	1551.11	-0.3

CTD REPORT RAMA-4 STATION: 6 CAST: 1 DN
POSITION: 38DEG 15.3MIN N 151DEG 59.0MIN E DATE: 6 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	19.356	19.356	34.301	24.421	24.421	352.57	0.000	0.0	1518.88	
10.0	9.9	19.020	19.018	34.288	24.498	24.541	345.64	0.035	0.2	1518.08	113.8
20.0	19.8	18.513	18.509	34.328	24.657	24.745	330.81	0.069	0.7	1516.84	388.5
30.0	29.8	16.337	16.332	34.484	25.304	25.436	269.52	0.099	1.5	1510.72	480.5
40.0	39.7	15.015	15.009	34.549	25.655	25.832	236.45	0.125	2.7	1506.84	271.8
50.0	49.6	13.891	13.884	34.510	25.867	26.090	216.47	0.148	4.0	1503.35	176.1
60.0	59.5	13.161	13.153	34.510	26.019	26.286	202.31	0.169	5.6	1501.11	111.6
70.0	69.5	12.689	12.679	34.489	26.098	26.410	195.05	0.189	7.4	1499.66	71.0
80.0	79.4	12.104	12.093	34.427	26.164	26.523	188.91	0.208	9.3	1497.77	51.6
90.0	89.3	11.865	11.853	34.418	26.203	26.607	185.43	0.227	11.5	1497.10	41.5
100.0	99.2	11.492	11.479	34.386	26.249	26.698	181.29	0.245	13.8	1495.94	61.0
110.0	109.1	10.877	10.863	34.342	26.328	26.823	173.95	0.263	16.4	1493.90	52.5
120.0	119.1	10.620	10.605	34.319	26.356	26.897	171.46	0.281	19.1	1493.12	35.3
130.0	129.0	10.175	10.160	34.274	26.399	26.986	167.51	0.298	21.9	1491.64	26.8
140.0	138.9	10.035	10.019	34.257	26.410	27.043	166.67	0.314	25.0	1491.28	23.7
150.0	148.8	9.682	9.665	34.227	26.446	27.125	163.34	0.331	28.2	1490.13	32.5
160.0	158.7	9.359	9.341	34.195	26.474	27.200	160.74	0.347	31.5	1489.07	25.2
170.0	168.7	9.088	9.069	34.166	26.496	27.268	158.82	0.363	35.0	1488.20	22.2
180.0	178.6	8.850	8.830	34.146	26.518	27.337	156.82	0.379	38.7	1487.46	20.3
190.0	188.5	8.530	8.510	34.104	26.535	27.401	155.27	0.394	42.6	1486.37	22.0
200.0	198.4	8.253	8.232	34.083	26.561	27.473	152.90	0.410	46.5	1485.47	17.6
210.0	208.3	8.144	8.122	34.073	26.570	27.528	152.22	0.425	50.7	1485.21	11.9
220.0	218.2	7.894	7.872	34.043	26.583	27.588	150.98	0.440	55.0	1484.38	13.6
230.0	228.2	7.720	7.697	34.026	26.595	27.647	149.93	0.455	59.4	1483.86	14.9
240.0	238.1	7.475	7.451	34.002	26.612	27.710	148.42	0.470	64.0	1483.05	14.2
250.0	248.0	7.287	7.263	33.981	26.622	27.767	147.52	0.485	68.7	1482.47	10.2
260.0	257.9	7.085	7.060	33.956	26.630	27.823	146.77	0.500	73.6	1481.81	13.8
270.0	267.8	6.793	6.768	33.927	26.647	27.887	145.16	0.514	78.7	1480.80	21.0
280.0	277.7	6.532	6.506	33.912	26.670	27.957	142.98	0.529	83.8	1479.92	25.8
290.0	287.6	6.117	6.091	33.877	26.695	28.032	140.42	0.543	89.1	1478.40	22.8
300.0	297.6	6.096	6.070	33.897	26.714	28.096	138.81	0.557	94.6	1478.50	17.9
310.0	307.5	5.910	5.883	33.889	26.731	28.161	137.21	0.571	100.2	1477.91	19.9
320.0	317.4	5.771	5.744	33.895	26.752	28.230	135.17	0.585	105.9	1477.52	18.1
330.0	327.3	5.586	5.558	33.883	26.765	28.290	133.94	0.598	111.8	1476.93	19.3
340.0	337.2	5.524	5.496	33.905	26.790	28.361	131.68	0.611	117.8	1476.87	16.3
350.0	347.1	5.424	5.395	33.899	26.797	28.415	131.03	0.624	123.9	1476.62	11.0
360.0	357.0	5.332	5.302	33.903	26.811	28.476	129.77	0.638	130.1	1476.41	18.4
370.0	366.9	5.355	5.324	33.936	26.835	28.545	127.70	0.650	136.5	1476.71	19.1
380.0	376.8	5.448	5.416	33.971	26.852	28.608	126.30	0.663	143.0	1477.29	19.1
390.0	386.7	5.426	5.393	33.997	26.875	28.677	124.22	0.676	149.7	1477.40	18.4
400.0	396.7	5.399	5.366	34.011	26.889	28.737	122.98	0.688	156.4	1477.47	17.2
410.0	406.6	5.285	5.251	34.019	26.909	28.804	121.13	0.700	163.3	1477.18	22.0
420.0	416.5	5.115	5.081	34.023	26.931	28.875	118.94	0.712	170.3	1476.65	17.5
430.0	426.4	5.144	5.109	34.042	26.943	28.932	117.96	0.724	177.4	1476.96	14.6
440.0	436.3	5.097	5.061	34.058	26.961	28.997	116.34	0.736	184.6	1476.95	18.3
450.0	446.2	5.059	5.022	34.076	26.980	29.062	114.64	0.748	192.0	1476.98	11.9
460.0	456.1	5.061	5.024	34.083	26.985	29.113	114.26	0.759	199.5	1477.16	15.2
470.0	466.0	4.948	4.910	34.098	27.010	29.185	111.93	0.770	207.0	1476.88	23.0
480.0	475.9	4.851	4.813	34.110	27.030	29.253	110.01	0.781	214.7	1476.66	18.5
490.0	485.8	4.838	4.799	34.129	27.047	29.315	108.55	0.792	222.5	1476.79	16.2
500.0	495.7	4.780	4.740	34.141	27.063	29.378	107.09	0.803	230.4	1476.73	12.6
510.0	505.6	4.756	4.716	34.149	27.072	29.433	106.31	0.814	238.4	1476.81	10.8
520.0	515.5	4.730	4.689	34.161	27.085	29.492	105.21	0.824	246.5	1476.88	14.7
530.0	525.4	4.678	4.636	34.175	27.101	29.556	103.68	0.835	254.7	1476.84	13.3
540.0	535.3	4.635	4.593	34.181	27.111	29.612	102.84	0.845	263.1	1476.84	9.6
550.0	545.2	4.591	4.548	34.186	27.120	29.667	102.06	0.856	271.5	1476.83	8.3
560.0	555.1	4.544	4.500	34.188	27.126	29.721	101.46	0.866	280.0	1476.80	12.2
570.0	565.0	4.458	4.414	34.197	27.143	29.784	99.91	0.876	288.6	1476.61	14.4
580.0	574.9	4.379	4.334	34.200	27.153	29.842	98.90	0.886	297.4	1476.45	10.2
590.0	584.8	4.336	4.291	34.205	27.162	29.897	98.13	0.896	306.2	1476.44	11.3
600.0	594.7	4.273	4.227	34.213	27.175	29.957	96.92	0.905	315.1	1476.36	11.9
610.0	604.6	4.219	4.173	34.218	27.185	30.014	96.02	0.915	324.1	1476.30	10.8
620.0	614.5	4.094	4.048	34.214	27.194	30.072	95.03	0.925	333.2	1475.94	13.4
630.0	624.4	4.073	4.026	34.231	27.210	30.134	93.62	0.934	342.4	1476.03	10.9
640.0	634.3	4.020	3.972	34.231	27.215	30.186	93.11	0.943	351.7	1475.97	8.5
650.0	644.2	3.962	3.914	34.236	27.225	30.243	92.17	0.953	361.1	1475.90	10.5
660.0	654.1	3.917	3.868	34.243	27.235	30.300	91.24	0.962	370.6	1475.88	11.9
670.0	664.0	3.881	3.832	34.255	27.249	30.360	90.05	0.971	380.1	1475.91	11.0
680.0	673.9	3.847	3.797	34.261	27.257	30.414	89.31	0.980	389.8	1475.94	6.9
690.0	683.8	3.830	3.779	34.265	27.262	30.466	88.89	0.989	399.5	1476.03	6.4
700.0	693.7	3.792	3.741	34.269	27.269	30.520	88.27	0.998	409.3	1476.04	6.3
710.0	703.6	3.776	3.724	34.273	27.273	30.571	87.88	1.007	419.3	1476.14	9.1
720.0	713.5	3.727	3.675	34.283	27.286	30.630	86.69	1.015	429.3	1476.11	10.1
730.0	723.4	3.715	3.662	34.290	27.293	30.683	86.12	1.024	439.4	1476.23	9.3
740.0	733.3	3.673	3.619	34.299	27.304	30.741	85.07	1.033	449.5	1476.23	11.1
750.0	743.2	3.634	3.580	34.307	27.314	30.798	84.13	1.041	459.8	1476.24	8.8
760.0	753.1	3.614	3.559	34.313	27.321	30.852	83.53	1.049	470.1	1476.33	10.9
770.0	763.0	3.565	3.510	34.325	27.335	30.913	82.19	1.058	480.5	1476.30	10.2
780.0	772.9	3.529	3.473	34.327	27.341	30.965	81.73	1.066	491.1	1476.31	6.9
790.0	782.8	3.493	3.437	34.332	27.348	31.019	81.04	1.074	501.6	1476.33	5.9
800.0	792.6	3.470	3.413	34.333	27.351	31.068	80.79	1.082	512.3	1476.39	3.5
810.0	802.5	3.455	3.397	34.335	27.354	31.118	80.55	1.090	523.0	1476.50	4.3
820.0	812.4	3.431	3.373	34.338	27.359	31.169	80.14	1.098	533.9	1476.56	4.2
830.0	822.3	3.417	3.358	34.340	27.362	31.218	79.92	1.106	544.8	1476.67	4.0
840.0	832.2	3.394	3.334	34.343	27.366	31.269	79.52	1.114	555.7	1476.74	5.5
850.0	842.1	3.362	3.302	34.346	27.372	31.321	79.02	1.122	566.8	1476.77	4.9
860.0	852.0	3.332	3.271	34.346	27.375	31.371	78.77	1.130	577.9	1476.81	4.4
870.0	861.9	3.294	3.233	34.347	27.379	31.422	78.36	1.138	589.2	1476.81	6.6
880.0	871.8	3.264	3.202	34.353	27.386	31.476	77.65	1.146	600.4	1476.85	8.9
890.0	881.6	3.224	3.162	34.360	27.396	31.533	76.78	1.153	611.8	1476.85	10.8
900.0	891.5	3.161	3.098	34.366	27.406	31.590	75.72	1.161	623.3	1476.76	7.6
910.0	901.4	3.145	3.082	34.368	27.409	31.640	75.47	1.169	634.8	1476.85	5.0
920.0	911.3	3.121	3.057	34.373	27.416	31.693	74.91	1.176	646.4	1476.92	3.9
930.0	921.2	3.117	3.052	34.374	27.417	31.740	74.86	1.184	658.0	1477.07	4.2
940.0	931.1	3.090	3.025	34.379	27.423	31.793	74.27	1.191	669.8	1477.12	7.6
950.0	941.0	3.060	2.994	34.385	27.431	31.847	73.55	1.199	681.6	1477.17	5.7
960.0	950.9	3.046	2.980	34.387	27.434	31.896	73.33	1.206	693.5	1477.27	4.4
970.0	960.7	3.025	2.958	34.391	27.439	31.948	72.86	1.213	705.4	1477.35	4.5

CTD REPORT RAMA-4 STATION 6 CAST 1 DN
POSITION 38DEG 15.3MIN N 151DEG 59.0MIN E DATE 6 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.008	2.940	34.393	27.442	31.997	72.61	1.220	717.4	1477.44	3.9
990.0	980.5	2.992	2.924	34.396	27.446	32.048	72.26	1.228	729.5	1477.54	3.8
1000.0	990.4	2.979	2.910	34.398	27.449	32.097	72.04	1.235	741.7	1477.65	5.8
1050.0	1039.8	2.894	2.822	34.417	27.471	32.352	70.02	1.270	803.6	1478.13	2.5
1100.0	1089.2	2.823	2.748	34.431	27.489	32.601	68.52	1.305	867.2	1478.67	5.8
1150.0	1138.6	2.762	2.683	34.443	27.504	32.847	67.27	1.339	932.5	1479.24	7.2
1200.0	1188.0	2.668	2.586	34.456	27.523	33.097	65.58	1.372	999.5	1479.67	1.7
1250.0	1237.3	2.595	2.510	34.468	27.539	33.344	64.17	1.405	1068.0	1480.19	4.7
1300.0	1286.7	2.484	2.396	34.487	27.563	33.601	61.82	1.436	1138.1	1480.56	5.8
1350.0	1336.0	2.443	2.352	34.496	27.574	33.842	60.98	1.467	1209.7	1481.22	3.4
1400.0	1385.4	2.394	2.300	34.505	27.585	34.083	60.02	1.497	1282.8	1481.84	1.0
1450.0	1434.7	2.350	2.252	34.515	27.597	34.325	59.04	1.527	1357.4	1482.49	3.2
1500.0	1484.0	2.268	2.167	34.532	27.617	34.576	57.13	1.556	1433.4	1482.98	2.8
1550.0	1533.3	2.218	2.114	34.541	27.629	34.817	56.14	1.584	1510.9	1483.60	2.2
1600.0	1582.6	2.167	2.059	34.549	27.639	35.058	55.19	1.612	1589.6	1484.22	2.2
1650.0	1631.9	2.136	2.025	34.555	27.647	35.294	54.63	1.639	1669.8	1484.92	3.4
1700.0	1681.2	2.089	1.974	34.565	27.659	35.535	53.57	1.666	1751.2	1485.56	0.7
1750.0	1730.5	2.063	1.945	34.571	27.666	35.770	53.06	1.693	1834.0	1486.28	1.5
1800.0	1779.7	2.031	1.909	34.576	27.673	36.005	52.52	1.720	1918.0	1486.98	1.7
1850.0	1829.0	1.995	1.869	34.583	27.681	36.241	51.80	1.746	2003.3	1487.66	3.0
1900.0	1878.2	1.963	1.834	34.588	27.688	36.476	51.26	1.771	2089.9	1488.36	2.3
1950.0	1927.4	1.934	1.801	34.593	27.694	36.710	50.75	1.797	2177.7	1489.07	1.3
2000.0	1976.6	1.911	1.774	34.597	27.699	36.942	50.38	1.822	2266.8	1489.81	1.4
2050.0	2025.8	1.868	1.728	34.606	27.710	37.180	49.39	1.847	2357.1	1490.47	2.0
2100.0	2075.0	1.840	1.696	34.610	27.716	37.413	48.96	1.872	2448.5	1491.19	1.0
2150.0	2124.2	1.822	1.674	34.614	27.720	37.644	48.63	1.896	2541.2	1491.95	1.3
2200.0	2173.4	1.800	1.648	34.617	27.725	37.874	48.33	1.920	2635.0	1492.70	0.6
2250.0	2222.6	1.778	1.622	34.621	27.730	38.105	47.95	1.944	2730.0	1493.45	1.7
2300.0	2271.7	1.751	1.591	34.626	27.736	38.337	47.41	1.968	2826.2	1494.17	0.4
2350.0	2320.9	1.733	1.569	34.630	27.741	38.567	47.08	1.992	2923.5	1494.94	1.6
2400.0	2370.0	1.713	1.545	34.634	27.746	38.797	46.71	2.015	3021.9	1495.70	1.3
2450.0	2419.1	1.702	1.530	34.635	27.748	39.023	46.66	2.039	3121.5	1496.49	0.5
2500.0	2468.2	1.687	1.510	34.638	27.751	39.252	46.41	2.062	3222.2	1497.27	0.9
2550.0	2517.3	1.663	1.482	34.642	27.756	39.482	45.97	2.085	3324.0	1498.02	2.3
2600.0	2566.4	1.639	1.454	34.646	27.762	39.711	45.54	2.108	3426.9	1498.76	1.0
2650.0	2615.5	1.620	1.431	34.649	27.766	39.940	45.23	2.131	3530.9	1499.52	0.9
2700.0	2664.6	1.610	1.417	34.651	27.768	40.165	45.10	2.153	3636.0	1500.33	0.7
2750.0	2713.6	1.598	1.400	34.654	27.772	40.392	44.88	2.176	3742.2	1501.13	0.9
2800.0	2762.7	1.591	1.389	34.655	27.773	40.616	44.87	2.198	3849.4	1501.94	0.6
2850.0	2811.7	1.583	1.376	34.656	27.775	40.840	44.85	2.220	3957.7	1502.76	0.3
2900.0	2860.7	1.576	1.365	34.659	27.778	41.066	44.68	2.243	4067.1	1503.58	0.2
2950.0	2909.7	1.570	1.354	34.660	27.780	41.289	44.67	2.265	4177.6	1504.40	0.7
3000.0	2958.8	1.565	1.344	34.661	27.781	41.512	44.68	2.287	4289.2	1505.23	1.1
3050.0	3007.8	1.555	1.330	34.662	27.783	41.735	44.61	2.310	4401.8	1506.04	0.2
3100.0	3056.7	1.543	1.313	34.664	27.786	41.960	44.45	2.332	4515.5	1506.84	0.3
3150.0	3105.7	1.534	1.299	34.666	27.788	42.183	44.32	2.354	4630.2	1507.65	1.0
3200.0	3154.7	1.526	1.286	34.668	27.791	42.407	44.21	2.376	4746.0	1508.47	0.7
3250.0	3203.6	1.516	1.272	34.669	27.793	42.629	44.14	2.398	4862.9	1509.28	0.4
3300.0	3252.6	1.512	1.263	34.671	27.795	42.851	44.07	2.421	4980.8	1510.12	0.2
3350.0	3301.5	1.504	1.250	34.672	27.796	43.073	44.04	2.443	5099.8	1510.94	0.6
3400.0	3350.4	1.501	1.242	34.673	27.798	43.294	44.06	2.465	5219.8	1511.79	0.7
3450.0	3399.4	1.497	1.233	34.674	27.799	43.515	44.06	2.487	5340.9	1512.63	0.6
3500.0	3448.3	1.494	1.225	34.675	27.801	43.735	44.08	2.509	5463.0	1513.47	0.2
3550.0	3497.2	1.492	1.218	34.676	27.802	43.955	44.12	2.531	5586.2	1514.32	0.7
3600.0	3546.0	1.490	1.210	34.677	27.803	44.175	44.14	2.553	5710.5	1515.17	0.4
3650.0	3594.9	1.490	1.205	34.677	27.803	44.393	44.27	2.575	5835.7	1516.03	0.2
3700.0	3643.8	1.488	1.198	34.678	27.805	44.612	44.31	2.597	5962.1	1516.88	0.2
3750.0	3692.6	1.485	1.190	34.678	27.805	44.831	44.39	2.619	6089.5	1517.73	0.1
3800.0	3741.5	1.485	1.184	34.679	27.806	45.049	44.45	2.641	6217.9	1518.59	0.3
3850.0	3790.3	1.482	1.176	34.679	27.807	45.267	44.54	2.664	6347.5	1519.43	0.3
3900.0	3839.1	1.480	1.169	34.680	27.808	45.485	44.57	2.686	6478.0	1520.29	0.2
3950.0	3887.9	1.478	1.161	34.681	27.810	45.703	44.60	2.708	6609.7	1521.14	0.5
4000.0	3936.7	1.478	1.156	34.682	27.811	45.921	44.66	2.730	6742.3	1522.00	0.1
4050.0	3985.5	1.474	1.146	34.683	27.812	46.139	44.64	2.753	6876.1	1522.85	0.6
4100.0	4034.3	1.473	1.140	34.684	27.813	46.356	44.68	2.775	7010.9	1523.71	0.2
4150.0	4083.1	1.474	1.135	34.684	27.814	46.572	44.83	2.797	7146.8	1524.58	-0.6
4200.0	4131.8	1.476	1.131	34.684	27.814	46.787	44.99	2.820	7283.7	1525.45	-0.1
4250.0	4180.6	1.477	1.127	34.685	27.815	47.004	45.06	2.842	7421.7	1526.32	0.2
4300.0	4229.3	1.479	1.123	34.685	27.815	47.219	45.22	2.865	7560.8	1527.20	0.4
4350.0	4278.0	1.482	1.120	34.686	27.816	47.434	45.32	2.888	7701.0	1528.08	0.1
4400.0	4326.8	1.485	1.117	34.685	27.816	47.648	45.56	2.910	7842.2	1528.95	0.2
4450.0	4375.5	1.486	1.112	34.686	27.817	47.863	45.65	2.933	7984.5	1529.83	0.2
4500.0	4424.2	1.488	1.108	34.686	27.817	48.077	45.80	2.956	8127.9	1530.70	0.0
4550.0	4472.9	1.490	1.104	34.686	27.817	48.291	45.94	2.979	8272.3	1531.58	0.5
4600.0	4521.5	1.494	1.102	34.687	27.818	48.505	46.07	3.002	8417.9	1532.46	-0.4
4650.0	4570.2	1.496	1.098	34.687	27.819	48.718	46.24	3.025	8564.5	1533.34	-0.0
4700.0	4618.8	1.498	1.094	34.687	27.819	48.931	46.38	3.048	8712.2	1534.22	-0.4
4750.0	4667.5	1.498	1.088	34.688	27.820	49.145	46.44	3.071	8861.0	1535.09	0.6
4800.0	4716.1	1.500	1.084	34.689	27.821	49.359	46.53	3.095	9011.0	1535.97	0.5
4850.0	4764.8	1.501	1.079	34.689	27.821	49.571	46.67	3.118	9162.0	1536.84	0.1
4900.0	4813.4	1.504	1.076	34.690	27.822	49.784	46.78	3.141	9314.1	1537.73	0.0
4950.0	4862.0	1.510	1.075	34.689	27.822	49.994	47.06	3.165	9467.3	1538.62	0.0
5000.0	4910.6	1.514	1.073	34.689	27.822	50.206	47.25	3.188	9621.7	1539.51	0.1
5050.0	4959.2	1.518	1.071	34.690	27.823	50.418	47.39	3.212	9777.1	1540.40	0.2
5100.0	5007.7	1.522	1.068	34.690	27.823	50.629	47.58	3.236	9933.7	1541.29	0.2
5150.0	5056.3	1.525	1.065	34.690	27.823	50.839	47.76	3.259	10091.3	1542.18	0.5
5200.0	5104.8	1.530	1.063	34.691	27.824	51.050	47.90	3.283	10250.2	1543.07	0.1
5250.0	5153.4	1.534	1.061	34.691	27.824	51.261	48.09	3.307	10410.1	1543.96	0.0
5300.0	5201.9	1.539	1.059	34.690	27.824	51.470	48.38	3.331	10571.2	1544.86	0.1
5350.0	5250.4	1.542									
5400.0	5298.9	1.548									
5450.0	5347.4	1.553									
5500.0	5395.9	1.557									
5550.0	5444.4	1.561									
5600.0	5492.9	1.567									
5650.0	5541.3	1.573									
5700.0	5589.8	1.577									
5750.0	5638.2	1.582									

CTD REPORT RAMA-4 STATION: 7 CAST: 2 DN
POSITION: 37DEG 31.3MIN N 152DEG 2.6MIN E DATE: 6 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	21.057	21.057	34.013	23.752	23.752	416.39	0.000	0.0	1523.24	
10.0	9.9	20.873	20.871	34.183	23.931	23.975	399.67	0.041	0.2	1523.10	241.9
20.0	19.8	20.163	20.159	34.358	24.254	24.341	369.25	0.081	0.8	1521.52	536.9
30.0	29.8	17.027	17.022	34.359	25.046	25.177	294.14	0.116	1.8	1512.66	606.0
40.0	39.7	15.450	15.444	34.490	25.512	25.689	250.02	0.144	3.1	1508.14	304.6
50.0	49.6	14.653	14.645	34.475	25.677	25.899	234.58	0.168	4.6	1505.77	125.8
60.0	59.5	14.203	14.194	34.472	25.772	26.039	225.82	0.191	6.4	1504.48	74.3
70.0	69.5	14.252	14.242	34.562	25.832	26.142	220.53	0.214	8.4	1504.91	53.7
80.0	79.4	13.889	13.877	34.529	25.883	26.239	215.85	0.235	10.6	1503.85	71.1
90.0	89.3	13.400	13.387	34.519	25.978	26.378	207.13	0.257	13.1	1502.40	69.4
100.0	99.2	13.120	13.106	34.507	26.026	26.472	202.79	0.277	15.7	1501.62	51.0
110.0	109.1	12.627	12.612	34.451	26.082	26.573	197.67	0.297	18.6	1500.06	68.1
120.0	119.1	11.639	11.623	34.311	26.164	26.702	189.92	0.317	21.6	1496.68	75.6
130.0	129.0	11.475	11.458	34.364	26.236	26.820	183.31	0.335	24.9	1496.34	67.9
140.0	138.9	10.895	10.878	34.313	26.302	26.933	177.07	0.353	28.3	1494.41	50.7
150.0	148.8	10.500	10.482	34.268	26.338	27.015	173.84	0.371	31.9	1493.12	40.2
160.0	158.7	10.313	10.294	34.285	26.384	27.106	169.66	0.388	35.6	1492.64	36.1
170.0	168.7	10.040	10.020	34.259	26.411	27.179	167.23	0.405	39.6	1491.79	29.6
180.0	178.6	9.751	9.730	34.237	26.443	27.257	164.33	0.422	43.7	1490.88	35.8
190.0	188.5	9.348	9.327	34.202	26.482	27.344	160.65	0.438	47.9	1489.53	30.1
200.0	198.4	9.023	9.001	34.160	26.502	27.410	158.83	0.454	52.4	1488.44	21.9
210.0	208.3	8.771	8.748	34.138	26.525	27.480	156.77	0.470	56.9	1487.64	28.0
220.0	218.2	8.324	8.301	34.090	26.556	27.559	153.78	0.485	61.7	1486.07	32.9
230.0	228.2	7.883	7.860	34.047	26.588	27.639	150.69	0.501	66.6	1484.51	32.0
240.0	238.1	7.452	7.428	34.005	26.617	27.716	147.87	0.516	71.6	1482.97	20.6
250.0	248.0	7.486	7.461	34.025	26.628	27.773	147.02	0.530	76.8	1483.29	18.1
260.0	257.9	6.984	6.959	33.966	26.652	27.845	144.66	0.545	82.1	1481.43	22.9
270.0	267.8	6.148	6.124	33.846	26.667	27.911	142.86	0.559	87.6	1478.16	17.5
280.0	277.7	6.020	5.996	33.844	26.681	27.973	141.54	0.574	93.2	1477.81	22.1
290.0	287.6	6.325	6.299	33.934	26.714	28.049	138.82	0.588	99.0	1479.29	21.6
300.0	297.6	6.196	6.169	33.930	26.727	28.109	137.60	0.601	104.9	1478.94	17.6
310.0	307.5	6.262	6.234	33.969	26.750	28.177	135.68	0.615	110.9	1479.41	15.6
320.0	317.4	6.082	6.054	33.951	26.758	28.233	134.86	0.629	117.1	1478.84	
330.0	327.3	5.803									
340.0	337.2	5.507	5.479	33.904	26.791	28.363	131.55	0.655	129.8	1476.80	
350.0	347.1	5.392	5.363	33.917	26.815	28.434	129.31	0.668	136.3	1476.51	24.2
360.0	357.0	5.566	5.536	33.977	26.842	28.505	127.05	0.681	143.0	1477.45	19.9
370.0	366.9	5.355	5.324	33.963	26.856	28.567	125.68	0.694	149.8	1476.74	17.7
380.0	376.8	5.262	5.231	33.974	26.876	28.633	123.86	0.706	156.8	1476.54	17.9
390.0	386.7	5.195	5.163	33.984	26.891	28.696	122.44	0.719	163.8	1476.44	18.7
400.0	396.7	5.148	5.115	34.005	26.913	28.764	120.44	0.731	171.0	1476.44	18.6
410.0	406.6	5.116	5.083	34.020	26.929	28.826	119.05	0.743	178.3	1476.49	20.2
420.0	416.5	4.993	4.959	34.033	26.953	28.898	116.75	0.755	185.7	1476.17	23.6
430.0	426.4	4.868	4.834	34.043	26.975	28.967	114.67	0.766	193.3	1475.83	15.5
440.0	436.3	4.824	4.789	34.047	26.983	29.022	113.98	0.778	200.9	1475.82	14.1
450.0	446.2	4.840	4.804	34.075	27.004	29.088	112.18	0.789	208.7	1476.08	17.7
460.0	456.1	4.668	4.632	34.069	27.018	29.150	110.76	0.800	216.5	1475.53	12.5
470.0	466.0	4.818	4.781	34.104	27.029	29.206	109.97	0.811	224.5	1476.35	11.0
480.0	475.9	4.763	4.725	34.112	27.042	29.265	108.84	0.822	232.6	1476.30	13.0
490.0	485.8	4.744	4.705	34.126	27.055	29.325	107.68	0.833	240.8	1476.40	15.0
500.0	495.7	4.654	4.615	34.134	27.071	29.388	106.16	0.844	249.1	1476.21	12.6
510.0	505.6	4.621	4.581	34.140	27.080	29.443	105.43	0.854	257.5	1476.24	8.8
520.0	515.5	4.655	4.614	34.157	27.089	29.498	104.65	0.865	266.0	1476.56	9.3
530.0	525.4	4.551	4.510	34.153	27.098	29.554	103.86	0.875	274.7	1476.29	15.0
540.0	535.3	4.486	4.444	34.170	27.118	29.621	101.95	0.886	283.4	1476.21	18.3
550.0	545.2	4.368	4.326	34.173	27.133	29.684	100.49	0.896	292.2	1475.89	12.5
560.0	555.1	4.325	4.282	34.178	27.141	29.739	99.73	0.906	301.1	1475.88	14.8
570.0	565.0	4.247	4.204	34.193	27.162	29.806	97.84	0.916	310.1	1475.73	16.7
580.0	574.9	4.161	4.117	34.197	27.174	29.866	96.68	0.925	319.2	1475.54	14.1
590.0	584.8	4.095	4.051	34.207	27.188	29.927	95.30	0.935	328.4	1475.44	11.4
600.0	594.7	4.098	4.053	34.217	27.196	29.981	94.66	0.945	337.8	1475.63	10.4
610.0	604.6	4.030	3.985	34.224	27.209	30.041	93.48	0.954	347.2	1475.52	11.5
620.0	614.5	3.984	3.938	34.230	27.218	30.097	92.63	0.963	356.6	1475.50	10.3
630.0	624.4	3.918	3.872	34.234	27.228	30.154	91.68	0.972	366.2	1475.39	8.8
640.0	634.3	3.919	3.872	34.243	27.235	30.207	91.11	0.982	375.9	1475.57	9.5
650.0	644.2	3.888	3.840	34.254	27.247	30.266	90.03	0.991	385.7	1475.61	10.9
660.0	654.1	3.838	3.790	34.259	27.256	30.322	89.19	1.000	395.5	1475.57	8.7
670.0	664.0	3.805	3.756	34.264	27.263	30.376	88.55	1.009	405.4	1475.60	9.1
680.0	673.9	3.760	3.711	34.271	27.273	30.433	87.61	1.017	415.5	1475.58	10.1
690.0	683.8	3.723	3.673	34.278	27.282	30.488	86.76	1.026	425.6	1475.60	8.1
700.0	693.7	3.684	3.633	34.281	27.289	30.541	86.21	1.035	435.8	1475.60	5.6
710.0	703.6	3.660	3.609	34.283	27.293	30.592	85.88	1.043	446.1	1475.67	6.9
720.0	713.5	3.613	3.561	34.288	27.301	30.647	85.08	1.052	456.4	1475.64	8.2
730.0	723.4	3.627	3.574	34.299	27.309	30.701	84.48	1.060	466.9	1475.87	8.4
740.0	733.3	3.596	3.543	34.307	27.318	30.757	83.63	1.069	477.4	1475.92	8.1
750.0	743.2	3.543	3.489	34.308	27.324	30.810	83.07	1.077	488.0	1475.86	6.3
760.0	753.1	3.514	3.460	34.311	27.329	30.862	82.59	1.086	498.7	1475.90	6.3
770.0	763.0	3.461	3.406	34.312	27.335	30.914	82.04	1.094	509.5	1475.84	6.5
780.0	772.9	3.453	3.398	34.319	27.341	30.967	81.50	1.102	520.4	1475.98	5.5
790.0	782.8	3.441	3.385	34.323	27.346	31.018	81.15	1.110	531.3	1476.10	7.2
800.0	792.6	3.402	3.345	34.330	27.355	31.074	80.28	1.118	542.3	1476.10	7.6
810.0	802.5	3.397	3.340	34.336	27.360	31.125	79.85	1.126	553.4	1476.25	5.6
820.0	812.4	3.366	3.308	34.339	27.366	31.177	79.37	1.134	564.6	1476.29	7.6
830.0	822.3	3.284	3.226	34.339	27.373	31.233	78.56	1.142	575.9	1476.10	8.6
840.0	832.2	3.295	3.236	34.351	27.382	31.287	77.87	1.150	587.2	1476.33	8.4
850.0	842.1	3.273	3.213	34.359	27.390	31.342	77.09	1.158	598.6	1476.41	7.1
860.0	852.0	3.233	3.173	34.360	27.395	31.393	76.66	1.165	610.1	1476.40	7.7
870.0	861.9	3.198	3.137	34.368	27.404	31.450	75.77	1.173	621.6	1476.43	7.4
880.0	871.8	3.178	3.117	34.371	27.409	31.500	75.40	1.180	633.3	1476.51	5.1
890.0	881.6	3.144	3.082	34.373	27.413	31.552	74.95	1.188	645.0	1476.53	4.8
900.0	891.5	3.113	3.051	34.374	27.417	31.602	74.61	1.195	656.8	1476.56	5.0
910.0	901.4	3.091	3.028	34.378	27.422	31.654	74.15	1.203	668.6	1476.63	4.8
920.0	911.3	3.077	3.013	34.381	27.426	31.704	73.85	1.210	680.6	1476.74	3.5
930.0	921.2	3.052	2.988	34.381	27.428	31.753	73.65	1.218	692.6	1476.80	4.2
940.0	931.1	3.039	2.974	34.386	27.433	31.804	73.19	1.225	704.6	1476.91	5.0
950.0	941.0	2.999	2.934	34.386	27.437	31.855	72.84	1.232	716.8	1476.91	4.7
960.0	950.9	2.990	2.924	34.391	27.442	31.906	72.42	1.240	729.0	1477.04	4.9
970.0	960.7	2.977	2.910	34.395	27.446	31.957	72.05	1.247	741.3	1477.15	3.8

CTD REPORT RAMA-4 STATION: 7 CAST: 2 DN
POSITION: 37DEG 31.3MIN N 152DEG 2.6MIN E DATE: 6 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD-1E6
5800.0	5686.7	1.579	1.032	34.690	27.825	53.557	50.33	3.598	12386.8	1553.78	0.1
5850.0	5735.1	1.584	1.030	34.691	27.826	53.765	50.47	3.623	12561.6	1554.68	-0.5
5900.0	5783.5	1.591	1.030	34.691	27.826	53.972	50.74	3.648	12737.5	1555.59	

CTD REPORT RAMA-4 STATION: 8 CAST: 1 DN
POSITION: 36DEG 44.0MIN N 151DEG 58.3MIN E DATE: 7 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	21.261	21.261	33.875	23.592	23.592	431.67	0.000	0.0	1523.64	
10.0	9.9	21.178	21.176	33.897	23.631	23.675	428.26	0.043	0.2	1523.60	248.7
20.0	19.8	20.083	20.079	34.138	24.108	24.195	383.17	0.085	0.8	1521.06	806.1
30.0	29.8	15.396	15.391	34.205	25.305	25.438	269.38	0.117	1.9	1507.48	723.3
40.0	39.7	13.952	13.946	34.192	25.609	25.787	240.68	0.143	3.2	1503.01	260.1
50.0	49.6	13.281	13.274	34.316	25.844	26.067	218.61	0.166	4.7	1501.11	176.6
60.0	59.5	12.538	12.530	34.292	25.975	26.243	206.40	0.187	6.4	1498.76	149.3
70.0	69.5	10.885	10.876	34.118	26.151	26.467	189.70	0.207	8.4	1493.00	114.9
80.0	79.4	10.192	10.183	34.037	26.210	26.572	184.23	0.226	10.5	1490.60	90.0
90.0	89.3	9.591	9.581	34.068	26.336	26.744	172.42	0.243	12.9	1488.62	99.2
100.0	99.2	9.501	9.490	34.150	26.415	26.869	165.13	0.260	15.4	1488.56	54.2
110.0	109.1	9.132	9.120	34.114	26.447	26.947	162.21	0.277	18.0	1487.32	44.5
120.0	119.1	7.973	7.961	33.957	26.503	27.052	156.81	0.293	20.9	1482.95	40.3
130.0	129.0	7.338	7.325	33.869	26.525	27.122	154.67	0.309	23.8	1480.57	23.5
140.0	138.9	7.539	7.525	33.937	26.550	27.192	152.53	0.324	27.0	1481.60	29.8
150.0	148.8	8.186	8.170	34.108	26.590	27.275	149.19	0.339	30.3	1484.43	26.6
160.0	158.7	8.326	8.309	34.158	26.608	27.338	147.71	0.354	33.7	1485.19	13.5
170.0	168.7	7.841	7.824	34.076	26.616	27.393	146.94	0.369	37.3	1483.41	33.6
180.0	178.6	5.904	5.889	33.809	26.667	27.499	141.48	0.383	41.0	1475.68	29.4
190.0	188.5	5.848	5.832	33.802	26.668	27.547	141.44	0.397	44.9	1475.61	0.9
200.0	198.4	5.499	5.483	33.746	26.666	27.592	141.61	0.411	48.9	1474.29	6.2
210.0	208.3	4.910	4.894	33.673	26.675	27.651	140.52	0.426	53.0	1471.97	11.4
220.0	218.2	4.538	4.522	33.633	26.684	27.709	139.61	0.440	57.3	1470.55	13.1
230.0	228.2	4.123	4.107	33.596	26.698	27.771	138.16	0.453	61.8	1468.94	7.0
240.0	238.1	4.260	4.243	33.612	26.697	27.816	138.45	0.467	66.3	1469.69	7.4
250.0	248.0	4.386	4.368	33.651	26.715	27.879	136.94	0.481	71.0	1470.43	18.9
260.0	257.9	5.745	5.723	33.884	26.746	27.948	134.94	0.495	75.9	1476.43	24.6
270.0	267.8	6.068	6.044	33.973	26.777	28.022	132.41	0.508	80.8	1478.00	26.0
280.0	277.7	6.509	6.483	34.081	26.806	28.093	130.13	0.521	85.9	1480.04	12.6
290.0	287.6	6.734	6.707	34.121	26.808	28.140	130.25	0.534	91.2	1481.14	8.0
300.0	297.6	6.651	6.623	34.126	26.823	28.201	128.92	0.547	96.5	1480.98	17.3
310.0	307.5	6.045	6.018	34.046	26.838	28.266	127.21	0.560	102.0	1478.65	22.3
320.0	317.4	5.737	5.710	34.028	26.861	28.339	124.86	0.572	107.6	1477.55	20.5
330.0	327.3	5.595	5.567	34.025	26.876	28.401	123.48	0.585	113.3	1477.14	13.0
340.0	337.2	5.487	5.459	34.021	26.886	28.457	122.59	0.597	119.2	1476.86	11.6
350.0	347.1	5.545	5.516	34.047	26.900	28.517	121.46	0.609	125.2	1477.29	16.2
360.0	357.0	5.651	5.620	34.090	26.921	28.583	119.69	0.622	131.3	1477.94	17.3
370.0	366.9	5.594	5.563	34.100	26.936	28.644	118.36	0.633	137.5	1477.88	12.0
380.0	376.8	5.305	5.274	34.065	26.943	28.700	117.60	0.645	143.8	1476.83	10.4
390.0	386.7	5.040	5.009	34.038	26.952	28.757	116.61	0.657	150.3	1475.88	26.2
400.0	396.7	4.289	4.259	33.979	26.986	28.846	112.71	0.669	156.9	1472.87	9.9
410.0	406.6	4.120	4.090	33.927	26.962	28.870	114.88	0.680	163.5	1472.26	-2.6
420.0	416.5	4.618	4.586	34.020	26.984	28.933	113.46	0.692	170.3	1474.61	19.6
430.0	426.4	4.857	4.823	34.087	27.011	29.003	111.27	0.703	177.2	1475.84	15.7
440.0	436.3	4.694	4.660	34.072	27.017	29.057	110.64	0.714	184.3	1475.32	11.2
450.0	446.2	4.563	4.528	34.071	27.031	29.118	109.33	0.725	191.4	1474.94	20.0
460.0	456.1	4.589	4.553	34.108	27.057	29.191	106.95	0.736	198.6	1475.25	17.3
470.0	466.0	4.513	4.477	34.108	27.065	29.246	106.19	0.746	206.0	1475.10	12.4
480.0	475.9	4.447	4.410	34.119	27.081	29.309	104.74	0.757	213.4	1475.01	12.1
490.0	485.8	4.416	4.379	34.125	27.089	29.363	104.05	0.767	220.9	1475.05	10.8
500.0	495.7	4.440	4.402	34.146	27.104	29.423	102.85	0.778	228.6	1475.34	14.6
510.0	505.6	4.351	4.312	34.153	27.119	29.485	101.41	0.788	236.4	1475.14	15.5
520.0	515.5	4.300	4.261	34.165	27.133	29.547	100.05	0.798	244.2	1475.11	12.7
530.0	525.4	4.292	4.252	34.177	27.144	29.604	99.16	0.808	252.2	1475.25	
540.0	535.3	4.197									
550.0	545.2	3.799	3.760	34.137	27.162	29.721	96.96	0.828	268.4	1473.46	
560.0	555.1	3.801	3.761	34.142	27.166	29.771	96.70	0.837	276.6	1473.64	5.1
570.0	565.0	3.871	3.830	34.160	27.173	29.824	96.18	0.847	284.9	1474.12	9.4
580.0	574.9	3.961	3.918	34.189	27.187	29.883	95.07	0.856	293.4	1474.70	14.2
590.0	584.8	4.090	4.046	34.229	27.206	29.945	93.60	0.866	301.9	1475.45	10.9
600.0	594.7	4.034	3.989	34.228	27.211	29.997	93.15	0.875	310.5	1475.38	8.6
610.0	604.6	3.941	3.896	34.229	27.221	30.055	92.14	0.885	319.2	1475.15	8.9
620.0	614.5	3.956	3.910	34.239	27.228	30.108	91.64	0.894	328.0	1475.39	9.0
630.0	624.4	3.940	3.894	34.252	27.240	30.166	90.59	0.903	336.9	1475.50	9.8
640.0	634.3	3.913	3.866	34.258	27.247	30.220	89.93	0.912	345.9	1475.56	6.0
650.0	644.2	3.890	3.842	34.260	27.251	30.270	89.60	0.921	355.0	1475.63	7.4
660.0	654.1	3.831	3.783	34.265	27.261	30.327	88.67	0.930	364.1	1475.55	7.4
670.0	664.0	3.788	3.739	34.264	27.265	30.378	88.36	0.939	373.4	1475.53	8.2
680.0	673.9	3.735	3.686	34.272	27.276	30.436	87.27	0.947	382.7	1475.48	9.7
690.0	683.8	3.685	3.635	34.274	27.283	30.490	86.65	0.956	392.1	1475.43	7.8
700.0	693.7	3.654	3.604	34.280	27.291	30.544	85.96	0.965	401.6	1475.47	9.5
710.0	703.6	3.615	3.564	34.288	27.301	30.601	85.02	0.973	411.2	1475.48	9.9
720.0	713.5	3.579	3.528	34.295	27.310	30.657	84.20	0.982	420.9	1475.50	8.1
730.0	723.4	3.554	3.502	34.300	27.316	30.710	83.63	0.990	430.6	1475.57	5.9
740.0	733.3	3.524	3.471	34.302	27.321	30.761	83.23	0.999	440.5	1475.60	6.8
750.0	743.2	3.501	3.448	34.310	27.329	30.816	82.47	1.007	450.4	1475.68	7.1
760.0	753.1	3.482	3.428	34.314	27.334	30.868	82.03	1.015	460.4	1475.77	6.4
770.0	763.0	3.451	3.396	34.319	27.341	30.921	81.41	1.023	470.5	1475.81	6.5
780.0	772.9	3.430	3.375	34.323	27.347	30.973	80.96	1.031	480.7	1475.89	4.2
790.0	782.8	3.418	3.362	34.325	27.349	31.022	80.75	1.040	490.9	1476.00	4.5
800.0	792.6	3.387	3.330	34.328	27.355	31.074	80.26	1.048	501.2	1476.04	4.9
810.0	802.5	3.353	3.296	34.328	27.358	31.124	79.98	1.056	511.6	1476.05	5.3
820.0	812.4	3.330	3.272	34.333	27.364	31.177	79.43	1.064	522.1	1476.13	8.0
830.0	822.3	3.293	3.235	34.340	27.373	31.232	78.58	1.071	532.7	1476.14	6.7
840.0	832.2	3.274	3.215	34.342	27.377	31.282	78.30	1.079	543.3	1476.23	4.4
850.0	842.1	3.247	3.188	34.344	27.381	31.333	77.93	1.087	554.0	1476.28	4.3
860.0	852.0	3.226	3.166	34.346	27.384	31.383	77.64	1.095	564.8	1476.35	4.4
870.0	861.9	3.206	3.145	34.349	27.388	31.434	77.26	1.103	575.7	1476.44	7.6
880.0	871.8	3.169	3.108	34.357	27.398	31.490	76.34	1.110	586.6	1476.45	6.9
890.0	881.6	3.151	3.089	34.359	27.401	31.540	76.07	1.118	597.6	1476.54	3.9
900.0	891.5	3.136	3.074	34.362	27.405	31.590	75.75	1.126	608.7	1476.64	5.4
910.0	901.4	3.112	3.049	34.367	27.411	31.643	75.19	1.133	619.9	1476.71	5.8
920.0	911.3	3.096	3.032	34.371	27.416	31.694	74.79	1.141	631.1	1476.81	6.5
930.0	921.2	3.060	2.996	34.376	27.423	31.748	74.10	1.148	642.4	1476.83	6.8
940.0	931.1	3.038	2.973	34.380	27.429	31.800	73.62	1.156	653.8	1476.90	4.2
950.0	941.0	3.027	2.962	34.382	27.431	31.849	73.43	1.163	665.3	1477.02	2.9
960.0	950.9	3.016	2.950	34.384	27.434	31.898	73.22	1.170	676.8	1477.14	4.9
970.0	960.7	2.992	2.925	34.389	27.440	31.950	72.66	1.178	688.4	1477.21	6.3

CTD REPORT RAMA-4 STATION: 8 CAST: 1 DN
POSITION: 36DEG 44.0MIN N 151DEG 58.3MIN E DATE: 7 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	2.974	2.907	34.394	27.446	32.002	72.16	1.185	700.1	1477.30	5.7
990.0	980.5	2.955	2.887	34.398	27.451	32.054	71.72	1.192	711.8	1477.39	5.6
1000.0	990.4	2.930	2.861	34.402	27.456	32.106	71.23	1.199	723.7	1477.45	5.5
1050.0	1039.8	2.836	2.764	34.417	27.476	32.358	69.40	1.234	783.8	1477.88	3.0
1100.0	1089.2	2.747	2.672	34.434	27.498	32.612	67.48	1.268	845.6	1478.34	5.5
1150.0	1138.6	2.672	2.594	34.447	27.515	32.860	66.01	1.302	909.1	1478.86	2.9
1200.0	1188.0	2.574	2.493	34.464	27.537	33.114	63.97	1.334	974.1	1479.28	3.6
1250.0	1237.3	2.503	2.419	34.477	27.553	33.362	62.51	1.366	1040.8	1479.81	4.9
1300.0	1286.7	2.448	2.361	34.486	27.565	33.604	61.51	1.397	1109.0	1480.40	1.5
1350.0	1336.0	2.388	2.298	34.496	27.578	33.848	60.37	1.427	1178.7	1480.98	3.6
1400.0	1385.4	2.341	2.247	34.506	27.590	34.090	59.35	1.457	1249.8	1481.61	2.5
1450.0	1434.7	2.288	2.191	34.517	27.604	34.334	58.22	1.487	1322.4	1482.22	3.7
1500.0	1484.0	2.247	2.146	34.525	27.613	34.573	57.41	1.516	1396.5	1482.88	2.4
1550.0	1533.3	2.200	2.096	34.535	27.625	34.815	56.37	1.544	1471.9	1483.52	4.2
1600.0	1582.6	2.163	2.055	34.541	27.633	35.052	55.73	1.572	1548.7	1484.19	2.7
1650.0	1631.9	2.110	1.999	34.551	27.646	35.294	54.63	1.600	1626.9	1484.80	2.7
1700.0	1681.2	2.055	1.941	34.561	27.658	35.536	53.48	1.627	1706.4	1485.40	1.9
1750.0	1730.5	2.032	1.914	34.566	27.664	35.770	53.06	1.653	1787.2	1486.14	1.2
1800.0	1779.7	1.984	1.863	34.575	27.675	36.010	52.06	1.680	1869.3	1486.77	2.2
1850.0	1829.0	1.970	1.845	34.577	27.678	36.240	51.94	1.706	1952.6	1487.54	1.6
1900.0	1878.2	1.938	1.809	34.584	27.686	36.476	51.25	1.732	2037.3	1488.25	2.2
1950.0	1927.4	1.901	1.768	34.591	27.695	36.712	50.51	1.757	2123.1	1488.93	1.6
2000.0	1976.6	1.872	1.736	34.596	27.701	36.946	49.98	1.782	2210.2	1489.64	1.4
2050.0	2025.8	1.838	1.698	34.602	27.709	37.181	49.33	1.807	2298.5	1490.34	1.3
2100.0	2075.0	1.818	1.674	34.606	27.714	37.412	48.97	1.832	2388.0	1491.09	1.3
2150.0	2124.2	1.793	1.645	34.611	27.720	37.645	48.49	1.856	2478.7	1491.82	0.9
2200.0	2173.4	1.776	1.624	34.614	27.724	37.875	48.26	1.880	2570.5	1492.59	0.9
2250.0	2222.6	1.756	1.600	34.617	27.728	38.105	47.96	1.904	2663.5	1493.34	1.0
2300.0	2271.7	1.736	1.576	34.622	27.734	38.336	47.52	1.928	2757.7	1494.10	1.3
2350.0	2320.9	1.719	1.555	34.624	27.737	38.564	47.34	1.952	2853.0	1494.87	0.9
2400.0	2370.0	1.701	1.533	34.628	27.742	38.794	46.99	1.975	2949.5	1495.64	1.5
2450.0	2419.1	1.678	1.506	34.632	27.747	39.025	46.56	1.999	3047.1	1496.38	0.4
2500.0	2468.2	1.664	1.488	34.634	27.750	39.252	46.40	2.022	3145.8	1497.17	0.5
2550.0	2517.3	1.656	1.475	34.637	27.753	39.479	46.24	2.045	3245.7	1497.98	0.8
2600.0	2566.4	1.635	1.450	34.640	27.757	39.707	45.92	2.068	3346.6	1498.73	1.1
2650.0	2615.5	1.622	1.433	34.641	27.759	39.933	45.84	2.091	3448.7	1499.52	1.7
2700.0	2664.6	1.606	1.413	34.645	27.764	40.161	45.48	2.114	3551.8	1500.30	0.7
2750.0	2713.6	1.602	1.404	34.646	27.765	40.385	45.53	2.137	3656.1	1501.13	0.2
2800.0	2762.7	1.596	1.394	34.648	27.767	40.610	45.45	2.159	3761.4	1501.96	0.6
2850.0	2811.7	1.584	1.377	34.649	27.769	40.835	45.36	2.182	3867.9	1502.75	0.7
2900.0	2860.7	1.573	1.362	34.653	27.774	41.061	45.07	2.205	3975.4	1503.56	1.4
2950.0	2909.7	1.564	1.348	34.653	27.775	41.284	45.10	2.227	4084.0	1504.37	1.0
3000.0	2958.8	1.549	1.329	34.655	27.778	41.510	44.89	2.250	4193.7	1505.15	0.5
3050.0	3007.8	1.544	1.319	34.656	27.779	41.732	44.89	2.272	4304.5	1505.98	0.2
3100.0	3056.7	1.536	1.306	34.659	27.782	41.957	44.70	2.294	4416.3	1506.80	0.4
3150.0	3105.7	1.533	1.298	34.660	27.784	42.179	44.74	2.317	4529.2	1507.64	0.7
3200.0	3154.7	1.526	1.286	34.662	27.786	42.402	44.63	2.339	4643.2	1508.47	1.2
3250.0	3203.6	1.525	1.280	34.662	27.786	42.622	44.76	2.362	4758.2	1509.31	0.3
3300.0	3252.6	1.520	1.271	34.663	27.788	42.844	44.76	2.384	4874.4	1510.15	0.8
3350.0	3301.5	1.512	1.258	34.664	27.790	43.066	44.72	2.406	4991.6	1510.97	0.9
3400.0	3350.4	1.504	1.245	34.665	27.791	43.287	44.67	2.429	5109.8	1511.79	0.7
3450.0	3399.4	1.497	1.233	34.666	27.793	43.509	44.62	2.451	5229.2	1512.62	1.0
3500.0	3448.3	1.493	1.224	34.668	27.795	43.730	44.56	2.473	5349.5	1513.46	0.1
3550.0	3497.2	1.493	1.219	34.669	27.796	43.949	44.63	2.495	5471.0	1514.32	0.7
3600.0	3546.0	1.491	1.211	34.669	27.797	44.168	44.73	2.518	5593.5	1515.16	1.2
3650.0	3594.9	1.489	1.204	34.670	27.798	44.388	44.75	2.540	5717.1	1516.01	0.2
3700.0	3643.8	1.483	1.193	34.671	27.799	44.608	44.72	2.562	5841.8	1516.85	0.5
3750.0	3692.6	1.481	1.186	34.672	27.801	44.827	44.75	2.585	5967.5	1517.70	0.6
3800.0	3741.5	1.478	1.178	34.673	27.802	45.046	44.76	2.607	6094.3	1518.55	0.9
3850.0	3790.3	1.477	1.171	34.674	27.803	45.264	44.81	2.630	6222.1	1519.41	0.2
3900.0	3839.1	1.477	1.166	34.675	27.805	45.482	44.87	2.652	6351.0	1520.27	0.2
3950.0	3887.9	1.481	1.164	34.675	27.805	45.698	45.07	2.674	6481.0	1521.15	0.1
4000.0	3936.7	1.480	1.158	34.675	27.805	45.915	45.18	2.697	6612.1	1522.00	0.3
4050.0	3985.5	1.477	1.149	34.677	27.807	46.134	45.11	2.720	6744.2	1522.86	0.4
4100.0	4034.3	1.476	1.143	34.677	27.808	46.350	45.22	2.742	6877.4	1523.71	-0.4
4150.0	4083.1	1.477	1.138	34.677	27.808	46.566	45.37	2.765	7011.7	1524.58	0.2
4200.0	4131.8	1.480	1.135	34.677	27.808	46.781	45.55	2.788	7147.0	1525.46	0.5
4250.0	4180.6	1.480	1.130	34.678	27.809	46.998	45.60	2.810	7283.5	1526.33	-0.1
4300.0	4229.3	1.486	1.130	34.678	27.809	47.212	45.82	2.833	7421.0	1527.22	0.0
4350.0	4278.0	1.490	1.128	34.679	27.810	47.427	45.94	2.856	7559.6	1528.10	0.2
4400.0	4326.8	1.491	1.123	34.679	27.811	47.642	46.09	2.879	7699.3	1528.97	-0.4
4450.0	4375.5	1.491	1.117	34.680	27.812	47.857	46.15	2.902	7840.0	1529.84	0.5
4500.0	4424.2	1.493	1.113	34.680	27.812	48.071	46.30	2.925	7981.9	1530.72	0.1
4550.0	4472.9	1.494	1.108	34.681	27.813	48.286	46.36	2.948	8124.9	1531.59	0.0
4600.0	4521.5	1.498	1.106	34.681	27.813	48.499	46.56	2.972	8269.0	1532.47	0.1
4650.0	4570.2	1.501	1.103	34.681	27.813	48.712	46.74	2.995	8414.1	1533.36	0.1
4700.0	4618.8	1.503	1.099	34.681	27.814	48.926	46.89	3.018	8560.4	1534.23	0.2
4750.0	4667.5	1.508	1.098	34.681	27.814	49.138	47.10	3.042	8707.8	1535.12	0.1
4800.0	4716.1	1.509	1.093	34.682	27.815	49.351	47.17	3.065	8856.3	1536.00	-0.2
4850.0	4764.8	1.514	1.091	34.682	27.815	49.563	47.39	3.089	9005.9	1536.89	0.0
4900.0	4813.4	1.517	1.088	34.682	27.815	49.775	47.55	3.113	9156.6	1537.77	0.0
4950.0	4862.0	1.522	1.087	34.682	27.815	49.987	47.76	3.137	9308.5	1538.67	0.5
5000.0	4910.6	1.526	1.085	34.683	27.816	50.199	47.89	3.161	9461.5	1539.56	0.5
5050.0	4959.2	1.530	1.082	34.682	27.816	50.409	48.15	3.185	9615.6	1540.44	-0.3
5100.0	5007.7	1.532	1.078	34.683	27.817	50.621	48.23	3.209	9770.8	1541.33	0.0
5150.0	5056.3	1.538	1.077	34.682	27.816	50.831	48.53	3.233	9927.2	1542.22	-0.1
5200.0	5104.8	1.542	1.075	34.683	27.817	51.042	48.66	3.257	10084.8	1543.11	0.2
5250.0	5153.4	1.547	1.073	34.684	27.818	51.253	48.80	3.282	10243.4	1544.01	0.4
5300.0	5201.9	1.550	1.070	34.684	27.818	51.463	48.98	3.306	10403.3	1544.90	-0.1
5350.0	5250.4	1.554	1.067	34.684	27.818	51.673	49.19	3.330	10564.3	1545.79	-0.2
5400.0	5298.9	1.557	1.064	34.684	27.818	51.882	49.35	3.355	10726.4	1546.68	-0.2
5450.0	5347.4	1.561	1.061	34.686	27.820	52.093	49.41	3.380	10889.7	1547.57	-0.1
5500.0	5395.9	1.564	1.057	34.687	27.821	52.303	49.52	3.404	11054.2	1548.46	0.8

CTD REPORT RAMA-4 STATION: 9 CAST: 2 DN
POSITION: 36DEG 16.7MIN N 152DEG 1.9MIN E DATE: 8 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	20.903	20.903	34.137	23.888	23.888	403.44	0.000	0.0	1522.97	
10.0	9.9	20.825	20.823	34.136	23.908	23.952	401.84	0.040	0.2	1522.92	115.7
20.0	19.8	20.214	20.210	34.209	24.128	24.214	381.34	0.080	0.8	1521.50	406.1
30.0	29.8	18.431	18.426	34.424	24.752	24.883	322.20	0.117	1.8	1516.87	688.5
40.0	39.7	15.570	15.564	34.583	25.557	25.733	245.81	0.145	3.1	1508.63	459.1
50.0	49.6	14.845	14.837	34.564	25.704	25.925	232.08	0.169	4.6	1506.48	107.6
60.0	59.5	14.374	14.365	34.528	25.779	26.045	225.23	0.192	6.4	1505.10	84.6
70.0	69.5	13.958	13.948	34.542	25.879	26.190	216.02	0.214	8.5	1503.93	86.6
80.0	79.4	13.259	13.248	34.455	25.957	26.313	208.78	0.236	10.7	1501.69	83.2
90.0	89.3	12.528	12.516	34.384	26.049	26.451	200.21	0.256	13.1	1499.32	83.3
100.0	99.2	12.247	12.234	34.415	26.128	26.576	192.93	0.276	15.8	1498.57	80.1
110.0	109.1	11.455	11.441	34.330	26.213	26.707	184.98	0.295	18.6	1495.91	78.7
120.0	119.1	11.047	11.032	34.331	26.289	26.829	177.94	0.313	21.6	1494.64	61.4
130.0	129.0	10.600	10.584	34.291	26.338	26.924	173.41	0.331	24.8	1493.18	49.5
140.0	138.9	10.215	10.198	34.270	26.389	27.021	168.68	0.348	28.2	1491.94	40.9
150.0	148.8	9.962	9.944	34.255	26.421	27.099	165.83	0.365	31.7	1491.18	26.1
160.0	158.7	9.767	9.748	34.239	26.441	27.166	164.03	0.381	35.4	1490.61	30.8
170.0	168.7	9.147	9.128	34.159	26.481	27.253	160.25	0.397	39.3	1488.41	38.0
180.0	178.6	8.634	8.615	34.099	26.515	27.335	157.01	0.413	43.3	1486.59	23.3
190.0	188.5	8.475	8.455	34.082	26.526	27.392	156.08	0.429	47.4	1486.14	23.8
200.0	198.4	8.106	8.085	34.056	26.562	27.475	152.73	0.444	51.8	1484.88	28.1
210.0	208.3	7.794	7.773	34.022	26.581	27.541	150.94	0.460	56.3	1483.81	22.9
220.0	218.2	7.453	7.431	33.991	26.606	27.613	148.62	0.475	60.9	1482.63	23.5
230.0	228.2	7.061	7.039	33.947	26.626	27.681	146.68	0.489	65.7	1481.22	19.0
240.0	238.1	6.797	6.775	33.921	26.641	27.744	145.23	0.504	70.6	1480.32	17.3
250.0	248.0	6.584	6.561	33.907	26.659	27.809	143.61	0.518	75.7	1479.63	24.5
260.0	257.9	6.357	6.334	33.908	26.689	27.886	140.75	0.533	80.9	1478.90	20.2
270.0	267.8	6.237	6.213	33.900	26.698	27.942	139.96	0.547	86.2	1478.58	11.2
280.0	277.7	6.339	6.314	33.934	26.712	28.001	138.87	0.561	91.7	1479.19	13.9
290.0	287.6	5.830	5.805	33.868	26.724	28.063	137.53	0.575	97.3	1477.24	15.8
300.0	297.6	5.858	5.832	33.894	26.741	28.125	136.07	0.588	103.1	1477.55	10.2
310.0	307.5	5.944	5.917	33.913	26.745	28.175	135.84	0.602	109.0	1478.08	13.8
320.0	317.4	6.221	6.192	33.991	26.772	28.246	133.66	0.615	115.0	1479.44	22.4
330.0	327.3	6.072	6.043	33.993	26.793	28.313	131.74	0.629	121.2	1479.01	16.8
340.0	337.2	5.798	5.769	33.963	26.803	28.372	130.69	0.642	127.5	1478.04	12.3
350.0	347.1	5.406	5.377	33.915	26.812	28.430	129.63	0.655	133.9	1476.56	15.8
360.0	357.0	5.302	5.272	33.924	26.831	28.497	127.85	0.668	140.5	1476.32	10.3
370.0	366.9	5.205	5.175	33.910	26.831	28.544	127.86	0.681	147.2	1476.07	5.4
380.0	376.8	5.062	5.031	33.900	26.840	28.600	127.04	0.693	154.0	1475.63	9.6
390.0	386.7	5.043	5.012	33.909	26.849	28.655	126.25	0.706	160.9	1475.73	15.8
400.0	396.7	5.229	5.196	33.967	26.874	28.724	124.22	0.719	168.0	1476.72	11.0
410.0	406.6	5.192	5.158	33.961	26.874	28.770	124.35	0.731	175.1	1476.73	7.4
420.0	416.5	5.291	5.256	33.996	26.890	28.831	123.02	0.743	182.4	1477.34	16.5
430.0	426.4	5.356	5.320	34.030	26.909	28.896	121.38	0.756	189.9	1477.81	19.1
440.0	436.3	5.330	5.293	34.052	26.930	28.963	119.56	0.768	197.4	1477.89	16.4
450.0	446.2	5.408	5.370	34.081	26.944	29.022	118.45	0.780	205.1	1478.41	17.7
460.0	456.1	4.929	4.892	34.034	26.961	29.091	116.36	0.791	212.9	1476.56	24.8
470.0	466.0	4.583	4.547	34.016	26.985	29.165	113.84	0.803	220.8	1475.27	16.3
480.0	475.9	4.454	4.417	34.004	26.989	29.217	113.38	0.814	228.8	1474.89	8.2
490.0	485.8	4.342	4.305	34.001	26.999	29.274	112.46	0.826	236.9	1474.58	14.1
500.0	495.7	4.389	4.351	34.031	27.018	29.338	110.84	0.837	245.1	1474.98	16.1
510.0	505.6	4.471	4.432	34.062	27.034	29.399	109.53	0.848	253.5	1475.52	14.6
520.0	515.5	4.463	4.423	34.080	27.049	29.461	108.21	0.859	261.9	1475.67	15.5
530.0	525.4	4.608	4.567	34.123	27.068	29.523	106.74	0.870	270.5	1476.49	16.6
540.0	535.3	4.811	4.768	34.177	27.089	29.587	105.18	0.880	279.1	1477.56	10.2
550.0	545.2	4.807	4.763	34.180	27.091	29.636	105.00	0.891	287.9	1477.71	9.8
560.0	555.1	4.591	4.547	34.168	27.105	29.699	103.50	0.901	296.8	1476.96	13.5
570.0	565.0	4.451	4.407	34.160	27.114	29.756	102.59	0.911	305.7	1476.54	8.9
580.0	574.9	4.405	4.360	34.162	27.121	29.809	102.01	0.922	314.8	1476.51	8.6
590.0	584.8	4.328	4.283	34.163	27.130	29.865	101.16	0.932	324.0	1476.36	9.1
600.0	594.7	4.278	4.232	34.166	27.137	29.920	100.47	0.942	333.3	1476.32	12.1
610.0	604.6	4.254	4.208	34.183	27.153	29.982	99.02	0.952	342.6	1476.40	13.2
620.0	614.5	4.217	4.170	34.191	27.163	30.039	98.10	0.962	352.1	1476.42	9.2
630.0	624.4	4.162	4.114	34.193	27.171	30.093	97.43	0.972	361.7	1476.36	7.6
640.0	634.3	4.115	4.067	34.195	27.177	30.146	96.85	0.981	371.3	1476.32	6.1
650.0	644.2	4.080	4.031	34.196	27.182	30.197	96.46	0.991	381.1	1476.34	4.7
660.0	654.1	4.062	4.013	34.199	27.186	30.248	96.12	1.001	390.9	1476.43	6.8
670.0	664.0	4.024	3.974	34.205	27.195	30.303	95.34	1.010	400.9	1476.45	10.5
680.0	673.9	4.009	3.958	34.218	27.206	30.362	94.29	1.020	410.9	1476.56	13.8
690.0	683.8	3.959	3.908	34.231	27.222	30.424	92.85	1.029	421.1	1476.53	10.8
700.0	693.7	3.943	3.891	34.236	27.228	30.476	92.40	1.038	431.3	1476.63	8.3
710.0	703.6	3.911	3.858	34.245	27.238	30.533	91.46	1.047	441.6	1476.67	10.4
720.0	713.5	3.866	3.813	34.251	27.247	30.589	90.59	1.057	452.0	1476.66	7.9
730.0	723.4	3.841	3.787	34.255	27.253	30.641	90.10	1.066	462.5	1476.72	8.3
740.0	733.3	3.828	3.773	34.267	27.264	30.698	89.14	1.075	473.1	1476.84	8.0
750.0	743.2	3.797	3.742	34.269	27.268	30.749	88.74	1.083	483.8	1476.88	6.1
760.0	753.1	3.765	3.709	34.273	27.275	30.802	88.17	1.092	494.6	1476.91	9.2
770.0	763.0	3.806	3.749	34.294	27.288	30.860	87.14	1.101	505.4	1477.27	8.4
780.0	772.9	3.728	3.671	34.289	27.291	30.911	86.72	1.110	516.3	1477.10	6.9
790.0	782.8	3.660	3.603	34.290	27.299	30.966	85.99	1.118	527.4	1476.98	7.3
800.0	792.6	3.629	3.571	34.293	27.304	31.018	85.50	1.127	538.5	1477.02	8.1
810.0	802.5	3.588	3.529	34.300	27.314	31.075	84.60	1.136	549.7	1477.02	7.3
820.0	812.4	3.576	3.517	34.304	27.318	31.125	84.26	1.144	560.9	1477.13	5.2
830.0	822.3	3.553	3.493	34.308	27.324	31.177	83.77	1.152	572.3	1477.20	5.3
840.0	832.2	3.526	3.465	34.310	27.328	31.228	83.41	1.161	583.7	1477.26	9.4
850.0	842.1	3.430	3.369	34.314	27.340	31.288	82.14	1.169	595.2	1477.02	12.6
860.0	852.0	3.378	3.317	34.321	27.350	31.346	81.13	1.177	606.8	1476.97	8.5
870.0	861.9	3.361	3.299	34.326	27.356	31.398	80.65	1.185	618.5	1477.07	5.7
880.0	871.8	3.343	3.281	34.330	27.361	31.449	80.22	1.193	630.3	1477.16	5.0
890.0	881.6	3.324	3.261	34.333	27.365	31.500	79.86	1.201	642.1	1477.24	4.8
900.0	891.5	3.308	3.244	34.337	27.370	31.551	79.45	1.209	654.0	1477.35	4.7
910.0	901.4	3.298	3.234	34.341	27.374	31.601	79.12	1.217	666.0	1477.47	6.8
920.0	911.3	3.264	3.199	34.348	27.383	31.657	78.31	1.225	678.1	1477.50	8.9
930.0	921.2	3.264	3.198	34.359	27.392	31.711	77.56	1.233	690.3	1477.68	7.7
940.0	931.1	3.238	3.172	34.364	27.398	31.764	76.97	1.241	702.5	1477.74	6.6
950.0	941.0	3.183	3.116	34.364	27.403	31.817	76.44	1.248	714.8	1477.66	5.3
960.0	950.9	3.162	3.095	34.366	27.407	31.867	76.13	1.256	727.2	1477.74	4.6
970.0	960.7	3.132	3.064	34.368	27.411	31.918	75.72	1.264	739.6	1477.78	5.9

CTD REPORT RAMA-4 STATION [illegible] DATE [illegible] 80

POSITION 36DEG 16.7MIN N 152DEG [illegible]MIN E

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA T	SV ANOM CL TON	DYN M	TRANSPORT FUNCTION	SOUND M SEC	[illegible] SQD SEC
980.0	970.6	3.104	3.036	34.373	27.417	31.971	75.13	[illegible]	[illegible]	[illegible]	6.9
990.0	980.5	3.080	3.011	34.378	27.424	32.024	74.58	[illegible]	[illegible]	[illegible]	[illegible]
1000.0	990.4	3.059	2.989	34.382	27.429	32.075	74.09	[illegible]	[illegible]	[illegible]	[illegible]
1050.0	1039.8	2.936	2.864	34.400	27.454	32.333	71.74	[illegible]	[illegible]	[illegible]	6.8
1100.0	1089.2	2.821	2.746	34.419	27.480	32.591	69.39	[illegible]	[illegible]	[illegible]	[illegible]
1150.0	1138.6	2.731	2.653	34.435	27.500	32.844	67.53	[illegible]	[illegible]	[illegible]	[illegible]
1200.0	1188.0	2.644	2.563	34.451	27.521	33.096	65.70	[illegible]	[illegible]	[illegible]	[illegible]
1250.0	1237.3	2.562	2.477	34.466	27.540	33.346	63.97	[illegible]	[illegible]	[illegible]	[illegible]
1300.0	1286.7	2.508	2.420	34.475	27.552	33.589	62.98	[illegible]	[illegible]	[illegible]	[illegible]
1350.0	1336.0	2.442	2.351	34.486	27.566	33.834	61.70	[illegible]	[illegible]	[illegible]	3.3
1400.0	1385.4	2.401	2.306	34.496	27.578	34.075	60.76	[illegible]	[illegible]	[illegible]	[illegible]
1450.0	1434.7	2.336	2.238	34.508	27.593	34.321	59.40	[illegible]	[illegible]	[illegible]	[illegible]
1500.0	1484.0	2.277	2.176	34.521	27.608	34.566	58.03	[illegible]	[illegible]	[illegible]	[illegible]
1550.0	1533.3	2.228	2.124	34.529	27.618	34.807	57.13	[illegible]	[illegible]	[illegible]	[illegible]
1600.0	1582.6	2.184	2.076	34.539	27.630	35.048	56.12	[illegible]	[illegible]	[illegible]	[illegible]
1650.0	1631.9	2.150	2.039	34.546	27.639	35.285	55.44	[illegible]	[illegible]	[illegible]	[illegible]
1700.0	1681.2	2.107	1.992	34.553	27.648	35.523	54.66	[illegible]	[illegible]	[illegible]	[illegible]
1750.0	1730.5	2.062	1.944	34.562	27.659	35.763	53.69	[illegible]	[illegible]	[illegible]	[illegible]
1800.0	1779.7	2.032	1.910	34.568	27.666	35.998	53.13	[illegible]	[illegible]	[illegible]	[illegible]
1850.0	1829.0	2.006	1.880	34.573	27.672	36.232	52.65	[illegible]	[illegible]	[illegible]	[illegible]
1900.0	1878.2	1.957	1.828	34.582	27.683	36.472	51.62	[illegible]	[illegible]	[illegible]	[illegible]
1950.0	1927.4	1.928	1.795	34.587	27.690	36.706	51.12	[illegible]	[illegible]	[illegible]	[illegible]
2000.0	1976.6	1.906	1.769	34.591	27.695	36.938	50.76	[illegible]	[illegible]	[illegible]	[illegible]
2050.0	2025.8	1.875	1.734	34.597	27.702	37.172	50.13	[illegible]	[illegible]	[illegible]	[illegible]
2100.0	2075.0	1.852	1.708	34.600	27.707	37.403	49.83	[illegible]	[illegible]	[illegible]	[illegible]
2150.0	2124.2	1.821	1.673	34.606	27.714	37.637	49.20	[illegible]	[illegible]	[illegible]	[illegible]
2200.0	2173.4	1.797	1.645	34.611	27.720	37.870	48.72	[illegible]	[illegible]	[illegible]	[illegible]
2250.0	2222.6	1.784	1.628	34.614	27.724	38.099	48.52	[illegible]	[illegible]	[illegible]	[illegible]
2300.0	2271.7	1.747	1.587	34.620	27.731	38.333	47.80	[illegible]	[illegible]	[illegible]	[illegible]
2350.0	2320.9	1.721	1.557	34.625	27.738	38.565	47.29	[illegible]	[illegible]	[illegible]	[illegible]
2400.0	2370.0	1.705	1.537	34.628	27.741	38.794	47.03	[illegible]	[illegible]	[illegible]	[illegible]
2450.0	2419.1	1.689	1.517	34.630	27.744	39.021	46.85	[illegible]	[illegible]	[illegible]	[illegible]
2500.0	2468.2	1.674	1.498	34.633	27.748	39.250	46.61	[illegible]	[illegible]	[illegible]	[illegible]
2550.0	2517.3	1.663	1.482	34.636	27.752	39.477	46.40	[illegible]	[illegible]	[illegible]	[illegible]
2600.0	2566.4	1.649	1.464	34.638	27.755	39.704	46.24	[illegible]	[illegible]	[illegible]	[illegible]
2650.0	2615.5	1.639	1.450	34.641	27.758	39.931	46.06	[illegible]	[illegible]	[illegible]	[illegible]
2700.0	2664.6	1.628	1.434	34.642	27.760	40.156	45.99	[illegible]	[illegible]	[illegible]	[illegible]
2750.0	2713.6	1.622	1.424	34.644	27.762	40.381	45.93	[illegible]	[illegible]	[illegible]	[illegible]
2800.0	2762.7	1.606	1.403	34.646	27.765	40.607	45.73	[illegible]	[illegible]	[illegible]	[illegible]
2850.0	2811.7	1.589	1.382	34.650	27.770	40.835	45.36	[illegible]	[illegible]	[illegible]	[illegible]
2900.0	2860.7	1.574	1.363	34.652	27.773	41.061	45.14	[illegible]	[illegible]	[illegible]	[illegible]
2950.0	2909.7	1.568	1.352	34.654	27.775	41.285	45.07	[illegible]	[illegible]	[illegible]	[illegible]
3000.0	2958.8	1.561	1.340	34.655	27.777	41.508	45.06	[illegible]	[illegible]	[illegible]	[illegible]
3050.0	3007.8	1.555	1.330	34.657	27.779	41.731	44.98	[illegible]	[illegible]	[illegible]	[illegible]
3100.0	3056.7	1.547	1.317	34.658	27.781	41.954	44.94	[illegible]	[illegible]	[illegible]	[illegible]
3150.0	3105.7	1.540	1.305	34.659	27.782	42.177	44.92	[illegible]	[illegible]	[illegible]	[illegible]
3200.0	3154.7	1.536	1.296	34.660	27.784	42.399	44.92	[illegible]	[illegible]	[illegible]	[illegible]
3250.0	3203.6	1.533	1.288	34.661	27.785	42.620	44.94	[illegible]	[illegible]	[illegible]	[illegible]
3300.0	3252.6	1.526	1.276	34.662	27.787	42.842	44.92	[illegible]	[illegible]	[illegible]	[illegible]
3350.0	3301.5	1.515	1.261	34.664	27.789	43.065	44.76	[illegible]	[illegible]	[illegible]	[illegible]
3400.0	3350.4	1.510	1.251	34.665	27.791	43.286	44.76	[illegible]	[illegible]	[illegible]	[illegible]
3450.0	3399.4	1.507	1.243	34.666	27.792	43.507	44.78	[illegible]	[illegible]	[illegible]	[illegible]
3500.0	3448.3	1.503	1.234	34.668	27.794	43.728	44.72	[illegible]	[illegible]	[illegible]	[illegible]
3550.0	3497.2	1.497	1.222	34.669	27.796	43.949	44.68	[illegible]	[illegible]	[illegible]	[illegible]
3600.0	3546.0	1.494	1.214	34.670	27.797	44.169	44.70	[illegible]	[illegible]	[illegible]	[illegible]
3650.0	3594.9	1.490	1.205	34.671	27.799	44.389	44.69	[illegible]	[illegible]	[illegible]	[illegible]
3700.0	3643.8	1.492	1.202	34.671	27.799	44.606	44.86	[illegible]	[illegible]	[illegible]	[illegible]
3750.0	3692.6	1.488	1.193	34.672	27.800	44.826	44.86	[illegible]	[illegible]	[illegible]	[illegible]
3800.0	3741.5	1.488	1.187	34.673	27.801	45.044	44.92	[illegible]	[illegible]	[illegible]	[illegible]
3850.0	3790.3	1.488	1.182	34.673	27.802	45.261	45.05	[illegible]	[illegible]	[illegible]	[illegible]
3900.0	3839.1	1.485	1.173	34.675	27.804	45.481	44.99	[illegible]	[illegible]	[illegible]	[illegible]
3950.0	3887.9	1.485	1.168	34.675	27.804	45.698	45.13	[illegible]	[illegible]	[illegible]	[illegible]
4000.0	3936.7	1.483	1.160	34.676	27.806	45.915	45.16	[illegible]	[illegible]	[illegible]	[illegible]
4050.0	3985.5	1.483	1.155	34.675	27.805	46.131	45.35	[illegible]	[illegible]	[illegible]	[illegible]
4100.0	4034.3	1.478	1.145	34.677	27.808	46.350	45.25	[illegible]	[illegible]	[illegible]	[illegible]
4150.0	4083.1	1.479	1.140	34.677	27.808	46.566	45.41	[illegible]	[illegible]	[illegible]	[illegible]
4200.0	4131.8	1.480	1.135	34.678	27.809	46.782	45.48	[illegible]	[illegible]	[illegible]	[illegible]
4250.0	4180.6	1.483	1.132	34.678	27.809	46.997	45.65	[illegible]	[illegible]	[illegible]	[illegible]
4300.0	4229.3	1.483	1.127	34.678	27.809	47.212	45.78	[illegible]	[illegible]	[illegible]	[illegible]
4350.0	4278.0	1.483	1.121	34.680	27.811	47.429	45.75	[illegible]	[illegible]	[illegible]	[illegible]
4400.0	4326.8	1.484	1.116	34.680	27.812	47.644	45.91	[illegible]	[illegible]	[illegible]	[illegible]
4450.0	4375.5	1.488	1.114	34.680	27.812	47.858	46.10	[illegible]	[illegible]	[illegible]	[illegible]
4500.0	4424.2	1.489	1.109	34.680	27.812	48.072	46.24	[illegible]	[illegible]	[illegible]	[illegible]
4550.0	4472.9	1.491	1.105	34.681	27.813	48.287	46.31	[illegible]	[illegible]	[illegible]	[illegible]
4600.0	4521.5	1.492	1.100	34.682	27.814	48.501	46.38	[illegible]	[illegible]	[illegible]	[illegible]
4650.0	4570.2	1.495	1.097	34.682	27.815	48.714	46.56	[illegible]	[illegible]	[illegible]	[illegible]
4700.0	4618.8	1.498	1.094	34.683	27.816	48.928	46.66	[illegible]	[illegible]	[illegible]	[illegible]
4750.0	4667.5	1.501	1.091	34.682	27.815	49.140	46.91	[illegible]	[illegible]	[illegible]	[illegible]
4800.0	4716.1	1.504	1.088	34.683	27.816	49.353	47.02	[illegible]	[illegible]	[illegible]	[illegible]
4850.0	4764.8	1.505	1.083	34.683	27.816	49.566	47.15	[illegible]	[illegible]	[illegible]	[illegible]
4900.0	4813.4	1.509	1.081	34.683	27.817	49.778	47.35	[illegible]	[illegible]	[illegible]	[illegible]
4950.0	4862.0	1.513	1.078	34.684	27.817	49.990	47.46	[illegible]	[illegible]	[illegible]	[illegible]
5000.0	4910.6	1.516	1.075	34.684	27.818	50.202	47.64	[illegible]	[illegible]	[illegible]	[illegible]
5050.0	4959.2	1.519	1.072	34.684	27.818	50.413	47.81	[illegible]	[illegible]	[illegible]	[illegible]
5100.0	5007.7	1.523	1.069	34.684	27.818	50.624	48.01	[illegible]	[illegible]	[illegible]	[illegible]
5150.0	5056.3	1.528	1.068	34.684	27.818	50.834	48.22	[illegible]	[illegible]	[illegible]	[illegible]
5200.0	5104.8	1.531	1.064	34.685	27.819	51.046	48.33	[illegible]	[illegible]	[illegible]	[illegible]
5250.0	5153.4	1.534	1.061	34.685	27.819	51.256	48.51	[illegible]	[illegible]	[illegible]	[illegible]
5300.0	5201.9	1.538	1.058	34.685	27.820	51.466	48.70	[illegible]	[illegible]	[illegible]	[illegible]
5350.0	5250.4	1.542	1.056	34.686	27.821	51.677	48.83	[illegible]	[illegible]	[illegible]	[illegible]
5400.0	5298.9	1.546	1.053	34.686	27.821	51.886	49.02	[illegible]	[illegible]	[illegible]	[illegible]
5450.0	5347.4	1.551	1.051	34.688	27.822	52.097	49.09	[illegible]	[illegible]	[illegible]	[illegible]
5500.0	5395.9	1.556	1.050	34.688	27.823	52.306	49.30	[illegible]	[illegible]	[illegible]	[illegible]
5550.0	5444.4	1.562	1.049	34.688	27.823	52.514	49.54	[illegible]	[illegible]	[illegible]	[illegible]
5600.0	5492.9	1.567	1.047	34.690	27.824	52.724	49.61	[illegible]	[illegible]	[illegible]	[illegible]

CTD REPORT RAMA-4 STATION: 10 CAST 1 DN
POSITION 35DEG 46.1MIN N 152DEG 2.4MIN E DATE: 8 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	21.834	21.834	34.292	23.750	23.750	416.53	0.000	0.0	1525.62	
10.0	9.9	21.766	21.764	34.288	23.767	23.810	415.38	0.042	0.2	1525.60	173.2
20.0	19.8	20.761	20.757	34.378	24.110	24.196	383.04	0.083	0.8	1523.18	217.3
30.0	29.8	20.305	20.299	34.359	24.218	24.348	373.13	0.120	1.8	1522.08	123.2
40.0	39.7	19.846	19.838	34.393	24.365	24.539	359.43	0.157	3.2	1521.01	129.0
50.0	49.6	19.440	19.431	34.411	24.485	24.703	348.38	0.193	4.9	1520.06	162.2
60.0	59.5	18.600	18.589	34.412	24.701	24.963	328.12	0.227	7.0	1517.84	216.9
70.0	69.5	18.095	18.083	34.552	24.935	25.241	306.21	0.259	9.4	1516.70	285.6
80.0	79.4	16.884	16.871	34.635	25.293	25.644	272.37	0.288	12.2	1513.37	258.5
90.0	89.3	16.137	16.122	34.636	25.469	25.865	255.85	0.315	15.2	1511.26	140.2
100.0	99.2	15.659	15.643	34.640	25.582	26.023	245.38	0.340	18.4	1509.95	117.1
110.0	109.1	15.006	14.989	34.616	25.710	26.197	233.40	0.364	21.9	1508.04	107.3
120.0	119.1	14.445	14.427	34.576	25.802	26.334	224.88	0.387	25.6	1506.36	78.0
130.0	129.0	13.935	13.916	34.522	25.870	26.447	218.67	0.409	29.6	1504.81	73.8
140.0	138.9	13.525	13.505	34.519	25.953	26.576	210.93	0.431	33.8	1503.63	68.2
150.0	148.8	13.156	13.135	34.493	26.009	26.677	205.84	0.452	38.1	1502.54	61.7
160.0	158.7	12.733	12.711	34.473	26.079	26.793	199.37	0.472	42.7	1501.26	58.4
170.0	168.7	12.114	12.091	34.378	26.127	26.888	194.88	0.492	47.5	1499.21	62.0
180.0	178.6	11.706	11.683	34.377	26.204	27.011	187.71	0.511	52.5	1497.97	63.4
190.0	188.5	11.351	11.327	34.358	26.256	27.109	182.94	0.530	57.6	1496.88	51.7
200.0	198.4	10.892	10.867	34.317	26.307	27.207	178.07	0.548	63.0	1495.39	38.7
210.0	208.3	10.554	10.528	34.271	26.332	27.278	175.85	0.566	68.5	1494.30	40.0
220.0	218.2	10.092	10.066	34.238	26.387	27.380	170.68	0.583	74.2	1492.76	42.8
230.0	228.2	9.888	9.861	34.233	26.418	27.457	167.88	0.600	80.1	1492.18	33.3
240.0	238.1	9.589	9.561	34.214	26.453	27.539	164.60	0.616	86.1	1491.24	31.2
250.0	248.0	9.060	9.032	34.135	26.477	27.612	162.21	0.633	92.3	1489.36	26.6
260.0	257.9	8.669	8.641	34.088	26.502	27.685	159.81	0.649	98.6	1488.01	26.7
270.0	267.8	8.348	8.320	34.058	26.528	27.758	157.37	0.665	105.1	1486.93	24.9
280.0	277.7	8.017	7.988	34.022	26.550	27.827	155.32	0.680	111.8	1485.80	30.6
290.0	287.6	7.478	7.449	33.968	26.585	27.912	151.77	0.696	118.6	1483.84	18.7
300.0	297.6	7.197	7.168	33.914	26.582	27.957	152.02	0.711	125.6	1482.85	
310.0	307.5	6.894									
320.0	317.4	6.854	6.824	33.888	26.609	28.077	149.57	0.741	140.0	1481.80	
330.0	327.3	7.013	6.981	33.940	26.628	28.141	148.01	0.756	147.4	1482.65	6.2
340.0	337.2	6.931	6.899	33.918	26.622	28.182	148.69	0.771	155.0	1482.47	13.2
350.0	347.1	6.613	6.581	33.902	26.652	28.260	145.76	0.786	162.7	1481.36	20.6
360.0	357.0	6.611	6.578	33.914	26.662	28.315	144.98	0.800	170.5	1481.53	26.9
370.0	366.9	6.554	6.520	33.962	26.707	28.407	140.80	0.814	178.5	1481.53	23.5
380.0	376.8	6.174	6.140	33.899	26.706	28.455	140.68	0.829	186.7	1480.11	5.6
390.0	386.7	6.157	6.122	33.907	26.715	28.510	139.99	0.843	195.0	1480.22	14.9
400.0	396.7	6.584	6.547	34.010	26.741	28.578	138.06	0.857	203.4	1482.20	17.9
410.0	406.6	6.598	6.560	34.031	26.756	28.638	136.82	0.870	211.9	1482.44	18.8
420.0	416.5	6.342	6.304	34.016	26.778	28.708	134.69	0.884	220.6	1481.58	16.5
430.0	426.4	5.842	5.805	33.942	26.782	28.764	133.90	0.897	229.5	1479.65	12.8
440.0	436.3	5.647	5.609	33.930	26.796	28.826	132.49	0.911	238.4	1479.02	8.9
450.0	446.2	5.414	5.376	33.894	26.795	28.874	132.43	0.924	247.5	1478.19	7.1
460.0	456.1	4.887	4.850	33.826	26.801	28.932	131.36	0.937	256.7	1476.12	25.5
470.0	466.0	4.607	4.571	33.834	26.838	29.018	127.67	0.950	266.1	1475.14	25.6
480.0	475.9	4.506	4.469	33.835	26.850	29.077	126.56	0.963	275.5	1474.89	16.1
490.0	485.8	4.964	4.925	33.931	26.876	29.144	124.75	0.976	285.1	1477.06	13.8
500.0	495.7	5.139	5.098	33.969	26.887	29.198	124.10	0.988	294.9	1477.98	13.4
510.0	505.6	4.999	4.958	33.971	26.904	29.263	122.38	1.000	304.7	1477.58	20.6
520.0	515.5	4.876	4.834	33.981	26.926	29.332	120.31	1.012	314.7	1477.25	16.3
530.0	525.4	4.849	4.807	33.990	26.936	29.389	119.42	1.024	324.8	1477.31	11.9
540.0	535.3	4.904	4.861	34.016	26.951	29.449	118.23	1.036	335.0	1477.73	11.4
550.0	545.2	4.922	4.878	34.031	26.961	29.504	117.43	1.048	345.3	1477.99	10.4
560.0	555.1	5.010	4.964	34.060	26.974	29.562	116.43	1.060	355.7	1478.55	16.1
570.0	565.0	4.786	4.740	34.051	26.992	29.629	114.55	1.071	366.3	1477.78	16.6
580.0	574.9	4.441	4.396	34.014	26.999	29.688	113.43	1.083	376.9	1476.47	10.8
590.0	584.8	4.318	4.273	34.007	27.007	29.743	112.65	1.094	387.7	1476.12	11.2
600.0	594.7	4.230	4.185	34.011	27.019	29.803	111.46	1.105	398.6	1475.92	17.5
610.0	604.6	4.621	4.573	34.099	27.048	29.871	109.45	1.116	409.6	1477.81	24.1
620.0	614.5	4.831	4.781	34.167	27.079	29.945	106.98	1.127	420.7	1478.93	15.8
630.0	624.4	4.828	4.777	34.173	27.084	29.996	106.61	1.138	431.9	1479.09	10.8
640.0	634.3	4.662	4.611	34.168	27.099	30.059	105.12	1.148	443.2	1478.56	13.9
650.0	644.2	4.632	4.580	34.178	27.110	30.116	104.11	1.159	454.6	1478.61	12.3
660.0	654.1	4.573	4.521	34.186	27.123	30.176	102.93	1.169	466.2	1478.54	10.7
670.0	664.0	4.534	4.481	34.190	27.130	30.230	102.27	1.180	477.8	1478.55	11.0
680.0	673.9	4.431	4.378	34.192	27.143	30.290	101.02	1.190	489.5	1478.29	12.3
690.0	683.8	4.349	4.296	34.193	27.152	30.347	100.09	1.200	501.3	1478.11	12.2
700.0	693.7	4.324	4.270	34.207	27.166	30.407	98.86	1.210	513.3	1478.19	9.0
710.0	703.6	4.247	4.192	34.200	27.168	30.457	98.57	1.220	525.3	1478.02	8.0
720.0	713.5	4.250	4.195	34.216	27.181	30.515	97.53	1.229	537.4	1478.22	14.1
730.0	723.4	4.111	4.056	34.216	27.195	30.578	96.02	1.239	549.6	1477.80	13.9
740.0	733.3	4.081	4.025	34.226	27.206	30.636	95.02	1.249	561.9	1477.85	10.8
750.0	743.2	4.002	3.946	34.227	27.215	30.692	94.14	1.258	574.3	1477.69	10.3
760.0	753.1	3.958	3.901	34.234	27.225	30.749	93.21	1.268	586.8	1477.67	11.7
770.0	763.0	3.940	3.882	34.248	27.238	30.808	92.05	1.277	599.4	1477.78	9.2
780.0	772.9	3.987	3.928	34.262	27.244	30.859	91.62	1.286	612.1	1478.16	6.0
790.0	782.8	3.953	3.894	34.265	27.250	30.912	91.11	1.295	624.8	1478.18	7.6
800.0	792.6	3.892	3.832	34.267	27.258	30.967	90.36	1.304	637.7	1478.09	8.9
810.0	802.5	3.828	3.768	34.269	27.266	31.022	89.56	1.313	650.6	1477.99	8.3
820.0	812.4	3.837	3.776	34.280	27.274	31.075	88.94	1.322	663.7	1478.20	7.8
830.0	822.3	3.841	3.779	34.291	27.282	31.130	88.24	1.331	676.8	1478.40	9.8
840.0	832.2	3.751	3.689	34.292	27.292	31.187	87.24	1.340	690.0	1478.18	9.5
850.0	842.1	3.685	3.623	34.292	27.298	31.241	86.57	1.349	703.3	1478.07	9.3
860.0	852.0	3.598	3.535	34.293	27.308	31.298	85.62	1.357	716.7	1477.87	7.7
870.0	861.9	3.568	3.505	34.294	27.311	31.348	85.28	1.366	730.1	1477.90	6.9
880.0	871.8	3.534	3.470	34.301	27.320	31.404	84.47	1.374	743.7	1477.93	9.4
890.0	881.6	3.498	3.434	34.308	27.329	31.460	83.63	1.383	757.3	1477.95	8.8
900.0	891.5	3.469	3.404	34.314	27.337	31.514	82.92	1.391	771.0	1478.00	5.6
910.0	901.4	3.456	3.390	34.316	27.340	31.563	82.71	1.399	784.8	1478.11	3.7
920.0	911.3	3.441	3.375	34.319	27.343	31.613	82.40	1.408	798.7	1478.21	3.5
930.0	921.2	3.433	3.366	34.321	27.346	31.662	82.23	1.416	812.7	1478.35	4.1
940.0	931.1	3.412	3.344	34.325	27.351	31.713	81.77	1.424	826.7	1478.43	7.7
950.0	941.0	3.374	3.306	34.332	27.360	31.769	80.90	1.432	840.8	1478.44	9.1
960.0	950.9	3.336	3.267	34.337	27.368	31.823	80.18	1.440	855.0	1478.45	5.4
970.0	960.7	3.328	3.259	34.339	27.370	31.872	80.01	1.448	869.3	1478.58	4.7

CTD REPORT RAMA-4 STATION: 10 CAST: 1 DN
POSITION: 35DEG 46.1MIN N 152DEG 2.4MIN E DATE: 8 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.302	3.232	34.344	27.377	31.925	79.43	1.456	883.6	1478.64	6.0
990.0	980.5	3.280	3.209	34.347	27.381	31.976	79.04	1.464	898.1	1478.71	4.5
1000.0	990.4	3.278	3.207	34.352	27.385	32.026	78.71	1.472	912.6	1478.87	7.2
1050.0	1039.8	3.145	3.071	34.375	27.416	32.289	75.86	1.511	986.3	1479.15	5.3
1100.0	1089.2	3.010	2.933	34.395	27.444	32.550	73.23	1.548	1061.8	1479.42	5.8
1150.0	1138.6	2.909	2.829	34.409	27.464	32.802	71.41	1.584	1139.2	1479.83	5.4
1200.0	1188.0	2.789	2.706	34.427	27.489	33.060	69.05	1.619	1218.3	1480.16	4.5
1250.0	1237.3	2.698	2.612	34.444	27.511	33.313	67.07	1.653	1299.0	1480.61	3.4
1300.0	1286.7	2.626	2.537	34.455	27.526	33.559	65.74	1.687	1381.5	1481.13	5.7
1350.0	1336.0	2.531	2.439	34.471	27.547	33.812	63.78	1.719	1465.5	1481.57	3.4
1400.0	1385.4	2.488	2.392	34.480	27.558	34.052	62.91	1.750	1551.1	1482.22	4.3
1450.0	1434.7	2.425	2.326	34.492	27.573	34.298	61.58	1.782	1638.2	1482.79	3.3
1500.0	1484.0	2.369	2.267	34.503	27.586	34.541	60.38	1.812	1726.8	1483.38	3.4
1550.0	1533.3	2.326	2.220	34.513	27.598	34.782	59.40	1.842	1816.9	1484.04	2.8
1600.0	1582.6	2.267	2.158	34.524	27.612	35.026	58.16	1.871	1908.4	1484.62	4.2
1650.0	1631.9	2.200	2.088	34.537	27.628	35.272	56.68	1.900	2001.4	1485.18	2.7
1700.0	1681.2	2.152	2.036	34.547	27.640	35.513	55.61	1.928	2095.7	1485.81	3.7
1750.0	1730.5	2.113	1.994	34.553	27.648	35.749	54.94	1.956	2191.3	1486.48	2.3
1800.0	1779.7	2.067	1.944	34.562	27.659	35.989	53.97	1.983	2288.4	1487.12	2.0
1850.0	1829.0	2.028	1.902	34.569	27.667	36.226	53.20	2.010	2386.7	1487.79	2.9
1900.0	1878.2	1.992	1.862	34.576	27.676	36.463	52.46	2.036	2486.3	1488.47	2.2
1950.0	1927.4	1.974	1.840	34.579	27.680	36.694	52.24	2.062	2587.1	1489.23	1.6
2000.0	1976.6	1.953	1.815	34.583	27.685	36.926	51.89	2.088	2689.3	1489.98	0.9
2050.0	2025.8	1.911	1.770	34.591	27.695	37.163	51.00	2.114	2792.7	1490.64	3.0
2100.0	2075.0	1.869	1.724	34.598	27.704	37.399	50.19	2.139	2897.3	1491.30	1.5
2150.0	2124.2	1.845	1.696	34.603	27.710	37.632	49.70	2.164	3003.1	1492.04	1.2
2200.0	2173.4	1.815	1.663	34.608	27.716	37.865	49.16	2.189	3110.1	1492.75	1.4
2250.0	2222.6	1.791	1.635	34.613	27.722	38.097	48.69	2.213	3218.3	1493.49	0.6
2300.0	2271.7	1.770	1.610	34.617	27.727	38.328	48.29	2.238	3327.7	1494.25	1.5
2350.0	2320.9	1.747	1.583	34.621	27.733	38.558	47.90	2.262	3438.3	1494.99	1.9
2400.0	2370.0	1.726	1.558	34.625	27.738	38.788	47.52	2.286	3550.0	1495.74	1.2
2450.0	2419.1	1.706	1.534	34.628	27.742	39.017	47.22	2.309	3662.8	1496.50	1.1
2500.0	2468.2	1.686	1.509	34.633	27.747	39.248	46.77	2.333	3776.8	1497.26	1.2
2550.0	2517.3	1.673	1.492	34.635	27.750	39.475	46.60	2.356	3891.9	1498.05	1.2
2600.0	2566.4	1.652	1.467	34.639	27.755	39.704	46.21	2.379	4008.1	1498.81	0.9
2650.0	2615.5	1.627	1.438	34.642	27.760	39.933	45.82	2.402	4125.5	1499.55	0.9
2700.0	2664.6	1.620	1.426	34.644	27.762	40.159	45.74	2.425	4243.9	1500.36	0.8
2750.0	2713.6	1.610	1.412	34.647	27.765	40.385	45.55	2.448	4363.4	1501.17	0.8
2800.0	2762.7	1.599	1.397	34.648	27.767	40.610	45.48	2.471	4484.0	1501.97	0.1
2850.0	2811.7	1.591	1.384	34.650	27.770	40.835	45.38	2.493	4605.7	1502.78	0.9
2900.0	2860.7	1.579	1.367	34.652	27.772	41.060	45.22	2.516	4728.5	1503.58	0.3
2950.0	2909.7	1.571	1.355	34.654	27.775	41.284	45.12	2.539	4852.4	1504.40	1.0
3000.0	2958.8	1.564	1.343	34.656	27.777	41.508	45.03	2.561	4977.4	1505.22	0.2
3050.0	3007.8	1.558	1.332	34.657	27.779	41.731	45.01	2.584	5103.4	1506.05	0.0
3100.0	3056.7	1.549	1.319	34.659	27.781	41.955	44.89	2.606	5230.5	1506.86	0.5
3150.0	3105.7	1.545	1.310	34.660	27.783	42.177	44.91	2.629	5358.7	1507.69	0.7
3200.0	3154.7	1.534	1.294	34.662	27.785	42.401	44.74	2.651	5487.9	1508.50	0.3
3250.0	3203.6	1.530	1.285	34.663	27.787	42.622	44.76	2.673	5618.3	1509.34	0.2
3300.0	3252.6	1.523	1.273	34.664	27.788	42.844	44.73	2.696	5749.6	1510.16	0.7
3350.0	3301.5	1.518	1.264	34.665	27.790	43.066	44.73	2.718	5882.1	1511.00	0.4
3400.0	3350.4	1.514	1.255	34.667	27.792	43.287	44.67	2.740	6015.6	1511.84	0.1
3450.0	3399.4	1.510	1.246	34.668	27.794	43.508	44.68	2.763	6150.2	1512.68	1.3
3500.0	3448.3	1.504	1.235	34.669	27.795	43.729	44.66	2.785	6285.8	1513.51	0.8
3550.0	3497.2	1.501	1.226	34.670	27.796	43.949	44.68	2.807	6422.6	1514.35	0.6
3600.0	3546.0	1.495	1.215	34.671	27.798	44.169	44.64	2.830	6560.3	1515.18	0.6
3650.0	3594.9	1.491	1.206	34.673	27.800	44.390	44.57	2.852	6699.2	1516.03	0.1
3700.0	3643.8	1.488	1.198	34.673	27.801	44.608	44.66	2.874	6839.1	1516.87	0.3
3750.0	3692.6	1.489	1.194	34.673	27.801	44.826	44.81	2.897	6980.0	1517.74	0.2
3800.0	3741.5	1.484	1.183	34.675	27.803	45.046	44.73	2.919	7122.0	1518.58	-0.2
3850.0	3790.3	1.483	1.177	34.675	27.804	45.264	44.83	2.941	7265.1	1519.43	0.4
3900.0	3839.1	1.480	1.169	34.675	27.804	45.482	44.92	2.964	7409.3	1520.28	0.1
3950.0	3887.9	1.478	1.161	34.677	27.806	45.700	44.87	2.986	7554.5	1521.14	0.3
4000.0	3936.7	1.478	1.156	34.678	27.808	45.918	44.93	3.009	7700.7	1522.00	-0.1
4050.0	3985.5	1.477	1.149	34.678	27.808	46.134	45.05	3.031	7848.1	1522.86	0.5
4100.0	4034.3	1.476	1.143	34.679	27.809	46.352	45.08	3.054	7996.5	1523.72	0.3
4150.0	4083.1	1.474	1.135	34.680	27.811	46.569	45.11	3.076	8145.9	1524.57	0.2
4200.0	4131.8	1.475	1.130	34.680	27.811	46.784	45.26	3.099	8296.4	1525.44	0.3
4250.0	4180.6	1.479	1.129	34.681	27.812	47.000	45.37	3.121	8448.0	1526.33	-0.4
4300.0	4229.3	1.480	1.124	34.682	27.813	47.216	45.44	3.144	8600.7	1527.20	0.3
4350.0	4278.0	1.480	1.118	34.682	27.813	47.431	45.57	3.167	8754.5	1528.06	0.2
4400.0	4326.8	1.480	1.112	34.683	27.814	47.647	45.62	3.190	8909.3	1528.93	0.8
4450.0	4375.5	1.479	1.105	34.683	27.815	47.862	45.74	3.213	9065.2	1529.79	0.1
4500.0	4424.2	1.483	1.103	34.683	27.815	48.075	45.92	3.235	9222.2	1530.68	0.0
4550.0	4472.9	1.487	1.101	34.684	27.816	48.290	46.04	3.258	9380.2	1531.56	0.4
4600.0	4521.5	1.490	1.098	34.684	27.816	48.503	46.22	3.282	9539.4	1532.44	0.3
4650.0	4570.2	1.492	1.094	34.685	27.817	48.717	46.30	3.305	9699.6	1533.32	-0.1
4700.0	4618.8	1.491	1.087	34.685	27.818	48.931	46.41	3.328	9861.0	1534.19	0.1
4750.0	4667.5	1.491	1.081	34.686	27.819	49.145	46.46	3.351	10023.4	1535.06	0.5
4800.0	4716.1	1.495	1.079	34.686	27.819	49.357	46.66	3.374	10186.9	1535.94	0.2
4850.0	4764.8	1.499	1.077	34.687	27.820	49.570	46.78	3.398	10351.5	1536.83	0.0
4900.0	4813.4	1.503	1.075	34.687	27.820	49.782	46.97	3.421	10517.3	1537.72	0.5
4950.0	4862.0	1.507	1.072	34.687	27.820	49.993	47.16	3.445	10684.1	1538.61	0.0
5000.0	4910.6	1.511	1.070	34.687	27.820	50.205	47.34	3.468	10852.0	1539.50	0.0
5050.0	4959.2	1.516	1.069	34.687	27.820	50.416	47.55	3.492	11021.1	1540.39	0.6
5100.0	5007.7	1.519	1.065	34.687	27.821	50.627	47.73	3.516	11191.3	1541.28	-0.7
5150.0	5056.3	1.524	1.064	34.688	27.822	50.838	47.87	3.540	11362.5	1542.17	0.1
5200.0	5104.8	1.526	1.059	34.688	27.822	51.049	48.03	3.564	11535.0	1543.05	0.3
5250.0	5153.4	1.529	1.056	34.689	27.823	51.260	48.14	3.588	11708.5	1543.94	0.1
5300.0	5201.9	1.534	1.054	34.689	27.823	51.470	48.34	3.612	11883.2	1544.84	0.1
5350.0	5250.4	1.538	1.052	34.689	27.823	51.680	48.55	3.636	12059.0	1545.73	0.1
5400.0	5298.9	1.544	1.051	34.689	27.823	51.889	48.77	3.660	12236.0	1546.63	-0.1
5450.0	5347.4	1.549	1.049	34.689	27.823	52.098	48.98	3.685	12414.0	1547.52	0.0
5500.0	5395.9	1.554	1.048	34.690	27.824	52.308	49.13	3.709	12593.3	1548.42	-0.0
5550.0	5444.4	1.559	1.046	34.690	27.824	52.516	49.34	3.734	12773.7	1549.32	-0.1
5600.0	5492.9	1.564	1.044	34.691	27.825	52.725	49.50	3.759	12955.3	1550.21	-0.4
5650.0	5541.3	1.568	1.041	34.691	27.825	52.934	49.69	3.783	13138.0	1551.11	0.5
5700.0	5589.8	1.572	1.039	34.691	27.826	53.142	49.88	3.808	13321.9	1552.00	0.0
5750.0	5638.2	1.578	1.038	34.691	27.826	53.350	50.13	3.833	13506.9	1552.90	0.5

CTD REPORT RAMA-4 STATION: 10 CAST: 1 DN
POSITION: 35DEG 46.1MIN N 152DEG 2.4MIN E DATE: 8 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
5800.0	5686.7	1.584	1.037	34.691	27.826	53.557	50.34	3.858	13693.1	1553.81	0.2
5850.0	5735.1	1.590	1.036	34.692	27.827	53.765	50.52	3.884	13880.5	1554.71	0.2
5900.0	5783.5	1.593	1.032	34.692	27.827	53.972	50.71	3.909	14069.1	1555.60	0.3
5950.0	5831.9	1.599	1.031	34.692	27.827	54.179	50.94	3.934	14258.9	1556.50	-0.1

CTD REPORT RAMA-4 STATION: 11 CAST: 2 DN
POSITION: 34DEG 58.0MIN N 152DEG 2.1MIN E DATE: 9 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	24.328	24.328	34.440	23.148	23.148	473.99	0.000	0.0	1532.11	
10.0	9.9	24.150	24.148	34.475	23.228	23.271	466.85	0.047	0.2	1531.88	66.8
20.0	19.8	24.002	23.998	34.495	23.287	23.373	461.64	0.094	0.9	1531.69	56.1
30.0	29.8	23.844	23.837	34.509	23.344	23.473	456.61	0.140	2.1	1531.48	243.0
40.0	39.7	22.870	22.862	34.728	23.791	23.963	414.35	0.184	3.7	1529.43	363.5
50.0	49.6	21.853	21.843	34.755	24.099	24.314	385.40	0.225	5.7	1527.00	476.9
60.0	59.5	19.994	19.983	34.989	24.781	25.041	320.71	0.260	8.1	1522.42	357.0
70.0	69.5	19.745	19.732	34.979	24.839	25.143	315.51	0.292	10.9	1521.88	58.2
80.0	79.4	19.455	19.440	34.960	24.901	25.248	310.02	0.324	13.9	1521.21	60.6
90.0	89.3	19.212	19.195	34.960	24.964	25.355	304.34	0.354	17.3	1520.69	82.3
100.0	99.2	18.747	18.729	34.943	25.071	25.506	294.53	0.384	21.0	1519.51	87.1
110.0	109.1	18.381	18.361	34.917	25.144	25.623	287.90	0.413	24.9	1518.60	59.3
120.0	119.1	18.072	18.051	34.879	25.192	25.716	283.60	0.442	29.2	1517.82	43.4
130.0	129.0	17.923	17.900	34.883	25.233	25.800	280.09	0.470	33.7	1517.55	36.4
140.0	138.9	17.686	17.662	34.851	25.267	25.879	277.15	0.498	38.5	1516.99	30.5
150.0	148.8	17.480	17.454	34.821	25.295	25.951	274.83	0.526	43.6	1516.51	28.2
160.0	158.7	17.356	17.329	34.820	25.325	26.024	272.33	0.553	48.9	1516.30	30.6
170.0	168.7	17.177	17.148	34.806	25.357	26.101	269.51	0.580	54.6	1515.92	28.7
180.0	178.6	17.025	16.995	34.791	25.383	26.171	267.41	0.607	60.4	1515.61	23.9
190.0	188.5	16.910	16.878	34.785	25.406	26.238	265.54	0.634	66.6	1515.42	24.2
200.0	198.4	16.770	16.736	34.775	25.432	26.308	263.37	0.660	73.0	1515.15	21.4
210.0	208.3	16.695	16.660	34.774	25.449	26.370	262.05	0.687	79.7	1515.08	13.2
220.0	218.2	16.647	16.610	34.771	25.459	26.423	261.47	0.713	86.6	1515.10	12.8
230.0	228.2	16.575	16.537	34.770	25.475	26.484	260.22	0.739	93.8	1515.04	17.0
240.0	238.1	16.465	16.425	34.759	25.493	26.545	258.84	0.765	101.3	1514.86	19.0
250.0	248.0	16.321	16.280	34.741	25.513	26.610	257.21	0.791	109.0	1514.56	19.6
260.0	257.9	16.197	16.154	34.728	25.532	26.673	255.67	0.816	117.0	1514.33	25.7
270.0	267.8	15.978	15.934	34.704	25.565	26.751	252.83	0.842	125.2	1513.80	23.0
280.0	277.7	15.881	15.836	34.692	25.578	26.809	251.83	0.867	133.7	1513.65	19.9
290.0	287.6	15.737	15.690	34.683	25.605	26.879	249.61	0.892	142.4	1513.35	30.2
300.0	297.6	15.519	15.471	34.663	25.639	26.959	246.56	0.917	151.3	1512.81	31.0
310.0	307.5	15.363	15.314	34.653	25.667	27.031	244.18	0.941	160.5	1512.48	26.5
320.0	317.4	15.199	15.149	34.638	25.692	27.101	242.01	0.966	170.0	1512.11	26.2
330.0	327.3	15.020	14.969	34.621	25.719	27.173	239.68	0.990	179.7	1511.69	35.9
340.0	337.2	14.748	14.696	34.601	25.763	27.263	235.61	1.014	189.6	1510.96	38.2
350.0	347.1	14.555	14.502	34.587	25.795	27.340	232.80	1.037	199.8	1510.49	35.7
360.0	357.0	14.284	14.230	34.562	25.834	27.425	229.23	1.060	210.2	1509.75	40.4
370.0	366.9	14.031	13.976	34.545	25.875	27.512	225.48	1.083	220.8	1509.08	37.6
380.0	376.8	13.842	13.786	34.537	25.909	27.591	222.44	1.106	231.6	1508.62	31.1
390.0	386.7	13.644	13.587	34.519	25.936	27.665	219.98	1.128	242.7	1508.11	41.9
400.0	396.7	13.310	13.253	34.501	25.991	27.766	214.80	1.150	254.0	1507.15	36.3
410.0	406.6	13.184	13.126	34.489	26.008	27.828	213.43	1.171	265.5	1506.88	35.5
420.0	416.5	12.860	12.801	34.473	26.061	27.928	208.43	1.192	277.2	1505.94	52.4
430.0	426.4	12.470	12.411	34.437	26.110	28.025	203.70	1.213	289.1	1504.75	56.2
440.0	436.3	12.083	12.024	34.418	26.171	28.133	197.94	1.233	301.2	1503.57	54.0
450.0	446.2	11.729	11.669	34.389	26.216	28.226	193.63	1.253	313.5	1502.48	43.5
460.0	456.1	11.445	11.385	34.371	26.255	28.313	189.91	1.272	326.0	1501.64	43.3
470.0	466.0	11.139	11.079	34.356	26.299	28.405	185.66	1.291	338.7	1500.71	47.8
480.0	475.9	10.805	10.745	34.340	26.347	28.501	181.04	1.309	351.6	1499.68	34.1
490.0	485.8	10.642	10.581	34.325	26.365	28.565	179.47	1.327	364.7	1499.25	18.9
500.0	495.7	10.504	10.442	34.317	26.383	28.629	177.85	1.345	377.9	1498.91	39.4
510.0	505.6	10.019	9.958	34.282	26.439	28.736	172.21	1.362	391.3	1497.29	47.3
520.0	515.5	9.684	9.623	34.251	26.472	28.817	169.01	1.380	404.9	1496.20	29.3
530.0	525.4	9.236	9.176	34.181	26.490	28.886	166.93	1.396	418.6	1494.64	28.9
540.0	535.3	8.924	8.864	34.158	26.522	28.966	163.76	1.413	432.5	1493.62	34.3
550.0	545.2	8.491	8.431	34.110	26.552	29.047	160.61	1.429	446.6	1492.10	20.3
560.0	555.1	8.286	8.226	34.075	26.556	29.098	160.18	1.445	460.8	1491.45	
570.0	565.0	8.029									
580.0	574.9	7.900	7.840	34.036	26.582	29.221	157.51	1.477	489.8	1490.26	
590.0	584.8	7.557	7.497	34.006	26.608	29.297	154.79	1.493	504.5	1489.08	31.0
600.0	594.7	7.643	7.582	34.066	26.643	29.376	151.79	1.508	519.3	1489.64	20.1
610.0	604.6	7.194	7.134	33.987	26.644	29.429	151.22	1.523	534.3	1487.98	26.8
620.0	614.5	7.035	6.974	34.017	26.690	29.522	146.88	1.538	549.5	1487.56	32.0
630.0	624.4	6.991	6.930	34.032	26.708	29.585	145.30	1.553	564.8	1487.57	15.7
640.0	634.3	6.929	6.867	34.038	26.721	29.645	144.12	1.567	580.2	1487.50	25.0
650.0	644.2	6.345	6.285	33.976	26.749	29.728	140.73	1.582	595.8	1485.29	23.4
660.0	654.1	6.255	6.194	33.973	26.758	29.784	139.87	1.596	611.5	1485.09	18.5
670.0	664.0	6.211	6.149	34.000	26.785	29.857	137.41	1.610	627.4	1485.11	24.6
680.0	673.9	6.047	5.985	34.000	26.805	29.926	135.35	1.623	643.4	1484.62	28.8
690.0	683.8	5.866	5.804	34.014	26.839	30.008	132.05	1.637	659.5	1484.08	31.2
700.0	693.7	5.692	5.630	34.019	26.864	30.082	129.53	1.650	675.8	1483.55	27.7
710.0	703.6	5.393	5.332	34.004	26.887	30.156	126.92	1.662	692.1	1482.48	24.1
720.0	713.5	5.289	5.228	34.013	26.907	30.223	125.06	1.675	708.7	1482.24	18.1
730.0	723.4	5.201	5.139	34.019	26.922	30.285	123.62	1.688	725.3	1482.05	20.8
740.0	733.3	5.044	4.982	34.026	26.945	30.357	121.25	1.700	742.0	1481.58	18.1
750.0	743.2	5.020	4.958	34.036	26.956	30.414	120.33	1.712	758.9	1481.66	12.8
760.0	753.1	4.964	4.901	34.046	26.970	30.475	118.99	1.724	775.9	1481.60	10.6
770.0	763.0	4.939	4.875	34.050	26.976	30.527	118.49	1.736	793.0	1481.67	7.8
780.0	772.9	4.911	4.847	34.057	26.985	30.582	117.73	1.748	810.3	1481.73	13.6
790.0	782.8	4.834	4.769	34.068	27.002	30.646	116.07	1.759	827.6	1481.59	16.8
800.0	792.6	4.748	4.683	34.074	27.016	30.708	114.68	1.771	845.1	1481.41	14.2
810.0	802.5	4.670	4.605	34.078	27.028	30.767	113.53	1.782	862.6	1481.25	13.8
820.0	812.4	4.681	4.615	34.099	27.043	30.828	112.21	1.794	880.3	1481.49	16.4
830.0	822.3	4.586	4.519	34.107	27.060	30.892	110.57	1.805	898.1	1481.27	15.3
840.0	832.2	4.564	4.497	34.120	27.073	30.951	109.45	1.816	916.0	1481.36	11.1
850.0	842.1	4.528	4.460	34.126	27.082	31.006	108.65	1.827	934.0	1481.38	8.8
860.0	852.0	4.512	4.443	34.134	27.090	31.060	107.97	1.837	952.2	1481.49	12.5
870.0	861.9	4.458	4.389	34.147	27.106	31.123	106.44	1.848	970.4	1481.44	15.2
880.0	871.8	4.421	4.351	34.159	27.119	31.183	105.20	1.859	988.7	1481.47	12.4
890.0	881.6	4.387	4.316	34.168	27.130	31.240	104.24	1.869	1007.1	1481.50	10.2
900.0	891.5	4.344	4.273	34.173	27.139	31.296	103.43	1.880	1025.7	1481.50	16.5
910.0	901.4	4.257	4.186	34.190	27.161	31.366	101.23	1.890	1044.3	1481.32	17.2
920.0	911.3	4.204	4.132	34.195	27.171	31.422	100.31	1.900	1063.0	1481.27	6.6
930.0	921.2	4.196	4.123	34.197	27.173	31.471	100.16	1.910	1081.9	1481.40	9.4
940.0	931.1	4.133	4.060	34.208	27.188	31.533	98.68	1.920	1100.8	1481.31	14.0
950.0	941.0	4.075	4.002	34.214	27.199	31.591	97.64	1.930	1119.8	1481.24	15.4
960.0	950.9	3.986	3.912	34.225	27.217	31.656	95.87	1.940	1139.0	1481.05	14.3
970.0	960.7	3.948	3.874	34.231	27.225	31.712	95.07	1.949	1158.2	1481.06	9.5

28 JAN 8

CTD REPORT RAMA-4 STATION 11 CAST 2 DN
POSITION 34DEG 58.0MIN N 152DEG 2.1MIN E DATE 9 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.901	3.826	34.236	27.234	31.767	94.23	1.959	1177.5	1481.03	9.5
990.0	980.5	3.863	3.788	34.242	27.243	31.823	93.42	1.968	1196.9	1481.05	11.9
1000.0	990.4	3.808	3.732	34.252	27.256	31.883	92.11	1.977	1216.4	1480.99	13.5
1050.0	1039.8	3.626	3.548	34.286	27.301	32.161	87.89	2.022	1315.2	1481.09	8.8
1100.0	1089.2	3.475	3.394	34.313	27.337	32.430	84.52	2.065	1416.2	1481.30	11.0
1150.0	1138.6	3.286	3.203	34.346	27.381	32.708	80.28	2.106	1519.2	1481.36	5.1
1200.0	1188.0	3.140	3.054	34.371	27.414	32.974	77.10	2.146	1624.2	1481.59	5.5
1250.0	1237.3	3.055	2.966	34.390	27.437	33.228	75.05	2.184	1731.1	1482.08	4.1
1300.0	1286.7	2.948	2.856	34.407	27.460	33.483	72.90	2.221	1839.8	1482.46	5.2
1350.0	1336.0	2.837	2.742	34.422	27.482	33.736	70.82	2.257	1950.2	1482.83	1.3
1400.0	1385.4	2.748	2.650	34.437	27.502	33.987	69.00	2.292	2062.4	1483.29	4.8
1450.0	1434.7	2.667	2.565	34.451	27.520	34.236	67.33	2.326	2176.3	1483.78	3.7
1500.0	1484.0	2.602	2.497	34.462	27.535	34.481	66.05	2.359	2291.8	1484.34	4.4
1550.0	1533.3	2.529	2.421	34.475	27.551	34.727	64.52	2.392	2408.9	1484.87	3.7
1600.0	1582.6	2.450	2.339	34.491	27.571	34.977	62.67	2.423	2527.6	1485.38	3.6
1650.0	1631.9	2.394	2.279	34.502	27.585	35.220	61.48	2.454	2647.8	1485.98	3.6
1700.0	1681.2	2.337	2.219	34.514	27.599	35.464	60.16	2.485	2769.5	1486.57	3.7
1750.0	1730.5	2.268	2.147	34.529	27.617	35.711	58.51	2.515	2892.7	1487.12	2.3
1800.0	1779.7	2.220	2.095	34.537	27.627	35.950	57.59	2.544	3017.2	1487.75	1.8
1850.0	1829.0	2.177	2.049	34.546	27.638	36.189	56.62	2.572	3143.2	1488.41	4.6
1900.0	1878.2	2.138	2.006	34.554	27.648	36.427	55.80	2.600	3270.5	1489.08	2.8
1950.0	1927.4	2.092	1.956	34.564	27.659	36.667	54.74	2.628	3399.2	1489.73	2.0
2000.0	1976.6	2.053	1.914	34.570	27.667	36.902	54.05	2.655	3529.2	1490.40	0.7
2050.0	2025.8	2.008	1.865	34.578	27.677	37.140	53.12	2.682	3660.5	1491.05	2.8
2100.0	2075.0	1.972	1.826	34.585	27.686	37.376	52.37	2.708	3793.0	1491.74	0.9
2150.0	2124.2	1.935	1.785	34.591	27.694	37.611	51.69	2.734	3926.9	1492.42	2.5
2200.0	2173.4	1.901	1.747	34.597	27.701	37.845	51.02	2.760	4062.0	1493.12	1.9
2250.0	2222.6	1.878	1.720	34.602	27.707	38.077	50.54	2.785	4198.3	1493.86	1.6
2300.0	2271.7	1.855	1.693	34.607	27.713	38.308	50.08	2.810	4335.8	1494.61	1.1
2350.0	2320.9	1.827	1.661	34.612	27.720	38.540	49.56	2.835	4474.5	1495.33	1.0
2400.0	2370.0	1.800	1.630	34.617	27.726	38.772	49.03	2.860	4614.4	1496.06	1.7
2450.0	2419.1	1.778	1.604	34.621	27.731	39.002	48.63	2.884	4755.5	1496.81	0.8
2500.0	2468.2	1.757	1.579	34.625	27.736	39.232	48.24	2.909	4897.7	1497.56	0.7
2550.0	2517.3	1.730	1.548	34.630	27.742	39.463	47.70	2.933	5041.1	1498.29	1.0
2600.0	2566.4	1.720	1.534	34.630	27.743	39.688	47.73	2.957	5185.6	1499.09	1.0
2650.0	2615.5	1.707	1.516	34.633	27.747	39.915	47.52	2.980	5331.3	1499.89	0.1
2700.0	2664.6	1.700	1.505	34.635	27.749	40.140	47.45	3.004	5478.1	1500.70	0.6
2750.0	2713.6	1.675	1.476	34.639	27.755	40.369	46.99	3.028	5626.1	1501.44	1.1
2800.0	2762.7	1.662	1.458	34.641	27.757	40.595	46.84	3.051	5775.1	1502.24	0.6
2850.0	2811.7	1.645	1.437	34.643	27.760	40.821	46.61	3.074	5925.3	1503.01	0.8
2900.0	2860.7	1.625	1.412	34.649	27.767	41.051	46.06	3.098	6076.6	1503.78	1.0
2950.0	2909.7	1.613	1.396	34.651	27.770	41.276	45.91	3.121	6229.0	1504.56	0.2
3000.0	2958.8	1.602	1.380	34.653	27.772	41.500	45.76	3.143	6382.5	1505.38	0.3
3050.0	3007.8	1.596	1.370	34.654	27.774	41.723	45.75	3.166	6537.1	1506.21	0.6
3100.0	3056.7	1.585	1.354	34.656	27.777	41.947	45.61	3.189	6692.7	1507.01	1.3
3150.0	3105.7	1.582	1.346	34.658	27.779	42.170	45.57	3.212	6849.5	1507.85	0.0
3200.0	3154.7	1.578	1.337	34.658	27.779	42.391	45.66	3.235	7007.3	1508.69	0.1
3250.0	3203.6	1.565	1.319	34.660	27.782	42.615	45.47	3.258	7166.2	1509.49	0.3
3300.0	3252.6	1.555	1.305	34.662	27.785	42.838	45.32	3.280	7326.2	1510.30	-0.9
3350.0	3301.5	1.550	1.295	34.664	27.787	43.060	45.26	3.303	7487.3	1511.14	-0.3
3400.0	3350.4	1.544	1.284	34.666	27.789	43.282	45.17	3.326	7649.4	1511.97	0.2
3450.0	3399.4	1.541	1.276	34.666	27.790	43.501	45.28	3.348	7812.6	1512.81	1.0
3500.0	3448.3	1.531	1.261	34.666	27.791	43.722	45.26	3.371	7976.9	1513.62	0.0
3550.0	3497.2	1.524	1.249	34.668	27.793	43.944	45.14	3.393	8142.2	1514.45	0.4
3600.0	3546.0	1.521	1.241	34.670	27.796	44.164	45.10	3.416	8308.7	1515.30	0.8
3650.0	3594.9	1.519	1.233	34.671	27.797	44.384	45.14	3.438	8476.1	1516.15	0.2
3700.0	3643.8	1.513	1.222	34.672	27.798	44.604	45.11	3.461	8644.7	1516.98	0.3
3750.0	3692.6	1.509	1.213	34.673	27.800	44.823	45.11	3.484	8814.3	1517.82	0.3
3800.0	3741.5	1.507	1.206	34.673	27.800	45.041	45.20	3.506	8985.0	1518.67	-0.1
3850.0	3790.3	1.504	1.197	34.675	27.802	45.260	45.16	3.529	9156.7	1519.52	0.2
3900.0	3839.1	1.502	1.190	34.675	27.803	45.478	45.26	3.551	9329.5	1520.38	-0.1
3950.0	3887.9	1.495	1.178	34.677	27.805	45.697	45.14	3.574	9503.4	1521.21	0.1
4000.0	3936.7	1.492	1.169	34.678	27.807	45.915	45.16	3.596	9678.3	1522.06	0.9
4050.0	3985.5	1.494	1.166	34.678	27.807	46.132	45.31	3.619	9854.3	1522.93	0.0
4100.0	4034.3	1.491	1.157	34.679	27.808	46.349	45.32	3.642	10031.4	1523.76	-0.4
4150.0	4083.1	1.495	1.155	34.678	27.808	46.564	45.60	3.664	10209.5	1524.66	0.0
4200.0	4131.8	1.495	1.150	34.678	27.808	46.779	45.72	3.687	10388.7	1525.53	0.1
4250.0	4180.6	1.495	1.144	34.680	27.810	46.997	45.69	3.710	10569.0	1526.39	0.6
4300.0	4229.3	1.494	1.137	34.680	27.810	47.212	45.80	3.733	10750.4	1527.25	0.1
4350.0	4278.0	1.491	1.129	34.681	27.812	47.429	45.81	3.756	10932.8	1528.11	0.2
4400.0	4326.8	1.493	1.125	34.681	27.812	47.643	45.97	3.779	11116.3	1528.98	0.6
4450.0	4375.5	1.493	1.119	34.683	27.814	47.859	45.97	3.802	11300.9	1529.85	0.9
4500.0	4424.2	1.497	1.117	34.683	27.814	48.073	46.16	3.825	11486.6	1530.74	0.5
4550.0	4472.9	1.496	1.110	34.682	27.814	48.286	46.32	3.848	11673.4	1531.60	-0.0
4600.0	4521.5	1.496	1.104	34.684	27.816	48.502	46.32	3.871	11861.2	1532.47	-0.4
4650.0	4570.2	1.499	1.101	34.684	27.816	48.715	46.50	3.894	12050.2	1533.35	0.0
4700.0	4618.8	1.502	1.098	34.685	27.817	48.929	46.60	3.918	12240.2	1534.23	0.0
4750.0	4667.5	1.505	1.095	34.685	27.817	49.141	46.78	3.941	12431.3	1535.12	-0.0
4800.0	4716.1	1.507	1.091	34.685	27.817	49.354	46.93	3.964	12623.5	1535.99	0.0
4850.0	4764.8	1.509	1.087	34.686	27.819	49.567	47.00	3.988	12816.8	1536.87	0.6
4900.0	4813.4	1.512	1.083	34.686	27.819	49.779	47.19	4.011	13011.3	1537.76	-0.1
4950.0	4862.0	1.514	1.082	34.686	27.819	49.991	47.40	4.035	13206.8	1538.65	0.1
5000.0	4910.6	1.520	1.079	34.686	27.819	50.202	47.58	4.059	13403.4	1539.53	0.6
5050.0	4959.2	1.522	1.074	34.687	27.820	50.415	47.66	4.083	13601.2	1540.42	0.0
5100.0	5007.7	1.523	1.073	34.687	27.820	50.625	47.86	4.106	13800.0	1541.31	0.0
5150.0	5056.3	1.531	1.071	34.687	27.820	50.836	48.05	4.130	14000.0	1542.20	-0.0
5200.0	5104.8	1.533	1.066	34.687	27.821	51.047	48.23	4.154	14201.1	1543.08	-0.0
5250.0	5153.4	1.534	1.064	34.687	27.821	51.257	48.42	4.179	14403.3	1543.97	0.0
5300.0	5201.9	1.540	1.060	34.687	27.821	51.467	48.60	4.203	14606.6	1544.86	0.0
5350.0	5250.4	1.543	1.057	34.688	27.822	51.678	48.81	4.227	14811.2	1545.75	0.6
5400.0	5298.9	1.546	1.053	34.689	27.823	51.889	48.80	4.252	15016.8	1546.63	-0.3
5450.0	5347.4	1.549	1.049	34.691	27.825	52.099	48.85	4.276	15223.6	1547.53	-0.3
5500.0	5395.9	1.553	1.047	34.689	27.824	52.307	49.19	4.300	15431.5	1548.41	-0.3
5550.0	5444.4	1.555	1.044	34.691	27.825	52.517	49.25	4.325	15640.4	1549.31	0.0
5600.0	5492.9	1.560	1.040	34.692	27.826	52.727	49.38	4.350	15850.6	1550.20	0.0
5650.0	5541.3	1.563	1.037	34.693	27.827	52.936	49.46	4.374	16062.1	1551.09	0.2
5700.0	5589.8	1.568	1.035	34.693	27.828	53.145	49.66	4.399	16274.7	1551.99	0.2
5750.0	5638.2	1.571	1.031	34.693	27.828	53.353	49.85	4.424	16488.3	1552.88	0.0

CTD REPORT RAMA-4 STATION: 11 CAST: 2 DN
POSITION: 34DEG 58.0MIN N 152DEG 2.1MIN E DATE: 9 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
5800.0	5686.7	1.578	1.031	34.693	27.828	53.560	50.10	4.449	16703.1	1553.78	0.2
5850.0	5735.1	1.582	1.028	34.692	27.827	53.767	50.37	4.474	16919.1	1554.68	0.1
5900.0	5783.5	1.582	1.021	34.694	27.829	53.976	50.35	4.499	17136.2	1555.56	0.2
5950.0	5831.9	1.587	1.019	34.694	27.829	54.183	50.58	4.524	17354.6	1556.45	0.3
6000.0	5880.3	1.592	1.017	34.695	27.830	54.391	50.72	4.550	17574.0	1557.35	-0.1

CTD REPORT RAMA-4 STATION 12 CAST 1 DN
POSITION 34DEG 30.5MIN N 152DEG 0.2MIN E DATE 9 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL.TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	24.913	24.913	34.541	23.051	23.051	483.30	0.000	0.0	1533.64	
10.0	9.9	24.885	24.883	34.539	23.059	23.101	483.02	0.048	0.2	1533.73	6.6
20.0	19.8	24.883	24.878	34.545	23.064	23.150	482.93	0.097	1.0	1533.90	65.3
30.0	29.8	24.516	24.509	34.571	23.194	23.322	471.01	0.145	2.2	1533.20	301.1
40.0	39.7	22.992	22.983	34.639	23.689	23.861	424.09	0.190	3.8	1529.65	431.2
50.0	49.6	21.834	21.824	34.735	24.089	24.304	386.35	0.230	5.9	1526.93	315.2
60.0	59.5	20.913	20.901	34.736	24.343	24.602	362.49	0.268	8.4	1524.64	185.9
70.0	69.5	20.410	20.396	34.730	24.474	24.777	350.36	0.304	11.2	1523.43	159.0
80.0	79.4	19.888	19.873	34.808	24.672	25.019	331.83	0.338	14.4	1522.25	112.1
90.0	89.3	19.769	19.752	34.811	24.706	25.096	328.98	0.371	17.9	1522.08	75.3
100.0	99.2	19.172	19.154	34.766	24.827	25.262	317.75	0.403	21.8	1520.52	122.3
110.0	109.1	18.562	18.542	34.733	24.958	25.437	305.58	0.435	25.9	1518.91	111.1
120.0	119.1	18.284	18.263	34.770	25.056	25.580	296.56	0.465	30.4	1518.31	89.8
130.0	129.0	17.970	17.947	34.781	25.143	25.711	288.61	0.494	35.1	1517.57	77.2
140.0	138.9	17.641	17.617	34.769	25.215	25.827	282.04	0.523	40.2	1516.76	50.7
150.0	148.8	17.502	17.476	34.766	25.247	25.903	279.34	0.551	45.5	1516.51	41.8
160.0	158.7	17.286	17.259	34.767	25.301	26.001	274.55	0.579	51.1	1516.03	49.8
170.0	168.7	17.133	17.104	34.782	25.350	26.094	270.24	0.606	57.0	1515.76	33.9
180.0	178.6	17.000	16.970	34.767	25.370	26.159	268.58	0.633	63.1	1515.50	18.8
190.0	188.5	16.948	16.916	34.773	25.388	26.220	267.27	0.660	69.5	1515.52	15.9
200.0	198.4	16.915	16.881	34.782	25.403	26.279	266.17	0.686	76.2	1515.59	12.7
210.0	208.3	16.871	16.836	34.782	25.414	26.333	265.49	0.713	83.1	1515.62	9.6
220.0	218.2	16.853	16.816	34.787	25.422	26.386	265.01	0.740	90.3	1515.74	10.5
230.0	228.2	16.779	16.740	34.780	25.435	26.442	264.14	0.766	97.8	1515.67	24.4
240.0	238.1	16.483	16.443	34.736	25.471	26.523	260.93	0.792	105.5	1514.89	23.2
250.0	248.0	16.426	16.385	34.731	25.481	26.577	260.29	0.818	113.5	1514.87	10.6
260.0	257.9	16.374	16.331	34.730	25.493	26.633	259.49	0.844	121.8	1514.88	27.2
270.0	267.8	16.081	16.037	34.697	25.536	26.721	255.62	0.870	130.3	1514.10	30.5
280.0	277.7	15.983	15.938	34.691	25.554	26.784	254.17	0.896	139.0	1513.96	23.2
290.0	287.6	15.794	15.747	34.671	25.582	26.857	251.75	0.921	148.0	1513.52	27.5
300.0	297.6	15.631	15.583	34.657	25.609	26.928	249.46	0.946	157.3	1513.16	40.5
310.0	307.5	15.351	15.302	34.646	25.664	27.028	244.44	0.971	166.8	1512.43	49.6
320.0	317.4	15.051	15.001	34.617	25.709	27.119	240.35	0.995	176.5	1511.62	35.6
330.0	327.3	14.901	14.850	34.608	25.735	27.190	238.07	1.019	186.5	1511.29	32.6
340.0	337.2	14.683	14.631	34.596	25.774	27.274	234.59	1.043	196.7	1510.75	52.8
350.0	347.1	14.286	14.233	34.571	25.840	27.387	228.33	1.066	207.2	1509.61	54.7
360.0	357.0	14.026	13.973	34.554	25.883	27.476	224.46	1.089	217.8	1508.91	45.7
370.0	366.9	13.719	13.665	34.533	25.931	27.570	219.97	1.111	228.7	1508.04	44.0
380.0	376.8	13.469	13.414	34.516	25.970	27.655	216.39	1.133	239.8	1507.37	49.4
390.0	386.7	13.105	13.050	34.496	26.029	27.761	210.83	1.154	251.2	1506.30	47.3
400.0	396.7	12.841	12.785	34.471	26.063	27.842	207.69	1.175	262.7	1505.55	32.5
410.0	406.6	12.617	12.560	34.451	26.092	27.917	205.03	1.196	274.5	1504.94	33.9
420.0	416.5	12.357	12.300	34.433	26.129	28.001	201.58	1.216	286.4	1504.20	25.1
430.0	426.4	12.276	12.217	34.428	26.141	28.058	200.63	1.236	298.6	1504.08	35.9
440.0	436.3	11.870	11.811	34.402	26.199	28.164	195.09	1.256	310.9	1502.82	53.5
450.0	446.2	11.598	11.539	34.396	26.246	28.257	190.68	1.275	323.4	1502.04	33.2
460.0	456.1	11.401	11.341	34.371	26.263	28.321	189.10	1.294	336.2	1501.49	20.4
470.0	466.0	11.240	11.179	34.360	26.284	28.389	187.18	1.313	349.1	1501.07	15.2
480.0	475.9	11.169	11.107	34.353	26.292	28.441	186.65	1.332	362.2	1500.98	22.8
490.0	485.8	10.891	10.829	34.334	26.328	28.525	183.24	1.350	375.5	1500.14	35.9
500.0	495.7	10.541	10.479	34.295	26.359	28.605	180.10	1.369	388.9	1499.02	36.1
510.0	505.6	10.289	10.227	34.285	26.396	28.689	176.63	1.386	402.6	1498.27	37.6
520.0	515.5	10.008	9.946	34.269	26.431	28.773	173.18	1.404	416.4	1497.40	34.8
530.0	525.4	9.554	9.492	34.207	26.459	28.850	170.27	1.421	430.4	1495.84	
540.0	535.3	9.219									
550.0	545.2	9.174	9.111	34.252	26.556	29.042	161.09	1.454	458.8	1494.82	
560.0	555.1	9.149	9.085	34.258	26.565	29.096	160.42	1.470	473.3	1494.90	12.6
570.0	565.0	9.108	9.043	34.270	26.581	29.157	159.06	1.486	488.0	1494.93	19.3
580.0	574.9	8.749	8.685	34.221	26.600	29.226	157.07	1.502	502.8	1493.70	32.9
590.0	584.8	7.381	7.322	33.995	26.624	29.315	153.03	1.518	517.7	1488.38	24.2
600.0	594.7	6.933	6.875	33.915	26.623	29.366	152.67	1.533	532.8	1486.71	29.1
610.0	604.6	6.361	6.305	33.878	26.669	29.466	147.66	1.548	548.0	1484.57	37.5
620.0	614.5	6.142	6.086	33.868	26.689	29.535	145.63	1.563	563.4	1483.85	19.3
630.0	624.4	6.645	6.585	33.981	26.714	29.597	144.21	1.577	579.0	1486.15	16.1
640.0	634.3	6.549	6.489	33.984	26.729	29.659	142.80	1.591	594.7	1485.94	25.1
650.0	644.2	6.199	6.140	33.965	26.759	29.740	139.58	1.606	610.5	1484.69	19.4
660.0	654.1	6.179	6.119	33.967	26.763	29.790	139.30	1.620	626.4	1484.78	16.0
670.0	664.0	6.271	6.209	34.020	26.793	29.864	136.76	1.633	642.5	1485.37	27.4
680.0	673.9	5.623	5.564	33.940	26.810	29.938	134.24	1.647	658.8	1482.84	28.7
690.0	683.8	5.565	5.505	33.970	26.840	30.015	131.39	1.660	675.1	1482.81	26.2
700.0	693.7	5.514	5.453	33.990	26.862	30.083	129.39	1.673	691.6	1482.79	14.5
710.0	703.6	5.544	5.482	34.004	26.870	30.136	128.85	1.686	708.3	1483.09	8.9
720.0	713.5	5.532	5.469	34.016	26.881	30.192	127.92	1.699	725.0	1483.22	14.0
730.0	723.4	5.616	5.552	34.053	26.900	30.256	126.39	1.712	741.9	1483.77	18.0
740.0	733.3	5.247	5.184	34.014	26.913	30.321	124.67	1.724	758.9	1482.39	18.1
750.0	743.2	5.189	5.126	34.027	26.930	30.384	123.10	1.737	776.0	1482.34	19.2
760.0	753.1	5.315	5.250	34.076	26.954	30.452	121.16	1.749	793.2	1483.07	22.7
770.0	763.0	5.293	5.227	34.104	26.979	30.523	118.92	1.761	810.6	1483.18	18.2
780.0	772.9	5.120	5.054	34.090	26.988	30.580	117.89	1.773	828.1	1482.63	11.5
790.0	782.8	5.076	5.010	34.097	26.998	30.637	116.92	1.785	845.7	1482.62	16.0
800.0	792.6	4.938	4.872	34.101	27.017	30.705	115.01	1.796	863.4	1482.22	19.1
810.0	802.5	4.718	4.652	34.087	27.030	30.768	113.45	1.808	881.2	1481.46	14.2
820.0	812.4	4.678	4.612	34.095	27.041	30.825	112.49	1.819	899.2	1481.47	14.4
830.0	822.3	4.629	4.562	34.110	27.058	30.889	110.86	1.830	917.2	1481.45	17.1
840.0	832.2	4.571	4.504	34.122	27.074	30.952	109.37	1.841	935.4	1481.39	17.2
850.0	842.1	4.495	4.427	34.133	27.091	31.016	107.74	1.852	953.6	1481.25	15.7
860.0	852.0	4.479	4.410	34.148	27.104	31.076	106.54	1.863	972.0	1481.37	11.9
870.0	861.9	4.447	4.378	34.156	27.114	31.132	105.66	1.873	990.5	1481.41	15.9
880.0	871.8	4.340	4.271	34.167	27.134	31.200	103.65	1.884	1009.0	1481.14	16.6
890.0	881.6	4.296	4.226	34.175	27.145	31.258	102.63	1.894	1027.7	1481.13	15.0
900.0	891.5	4.253	4.183	34.192	27.163	31.322	100.95	1.905	1046.5	1481.14	17.6
910.0	901.4	4.204	4.133	34.206	27.179	31.385	99.41	1.915	1065.4	1481.12	16.5
920.0	911.3	4.148	4.077	34.218	27.194	31.448	97.95	1.924	1084.4	1481.06	13.5
930.0	921.2	4.103	4.031	34.225	27.205	31.504	96.99	1.934	1103.4	1481.05	7.3
940.0	931.1	4.086	4.013	34.227	27.208	31.554	96.73	1.944	1122.6	1481.14	8.6
950.0	941.0	4.051	3.978	34.239	27.221	31.614	95.51	1.954	1141.9	1481.18	12.8
960.0	950.9	3.991	3.917	34.245	27.232	31.672	94.45	1.963	1161.2	1481.10	12.0
970.0	960.7	3.911	3.837	34.248	27.242	31.730	93.38	1.972	1180.7	1480.93	9.0

CTD REPORT RAMA-4 STATION 12 CAST 1 DN
POSITION 34DEG 30.5MIN N 152DEG 0.2MIN E DATE 9 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.889	3.814	34.252	27.248	31.781	92.90	1.982	1200.2	1481.00	5.6
990.0	980.5	3.873	3.798	34.256	27.253	31.832	92.51	1.991	1219.8	1481.11	6.4
1000.0	990.4	3.810	3.734	34.256	27.259	31.886	91.84	2.000	1239.6	1481.00	8.8
1050.0	1039.8	3.547	3.469	34.292	27.313	32.176	86.52	2.045	1339.5	1480.76	10.3
1100.0	1089.2	3.412	3.331	34.321	27.349	32.444	83.21	2.087	1441.6	1481.04	9.1
1150.0	1138.6	3.268	3.185	34.350	27.386	32.713	79.77	2.128	1545.7	1481.29	7.1
1200.0	1188.0	3.135	3.049	34.371	27.415	32.975	77.04	2.167	1651.7	1481.57	4.9
1250.0	1237.3	3.041	2.952	34.386	27.435	33.227	75.19	2.205	1759.7	1482.01	4.5
1300.0	1286.7	2.939	2.847	34.403	27.458	33.481	73.10	2.242	1869.5	1482.42	6.6
1350.0	1336.0	2.822	2.727	34.424	27.485	33.740	70.51	2.278	1981.0	1482.77	4.0
1400.0	1385.4	2.725	2.627	34.441	27.507	33.993	68.44	2.313	2094.3	1483.19	3.4
1450.0	1434.7	2.647	2.546	34.456	27.526	34.243	66.73	2.347	2209.2	1483.70	4.4
1500.0	1484.0	2.582	2.477	34.470	27.543	34.489	65.23	2.380	2325.7	1484.27	4.0
1550.0	1533.3	2.505	2.397	34.481	27.558	34.735	63.80	2.412	2443.9	1484.77	3.6
1600.0	1582.6	2.419	2.308	34.496	27.577	34.985	61.95	2.443	2563.6	1485.25	3.3
1650.0	1631.9	2.350	2.236	34.509	27.594	35.231	60.45	2.474	2684.7	1485.79	4.4
1700.0	1681.2	2.294	2.177	34.521	27.608	35.475	59.15	2.504	2807.4	1486.39	3.2
1750.0	1730.5	2.235	2.114	34.533	27.622	35.719	57.82	2.533	2931.5	1486.98	2.5
1800.0	1779.7	2.197	2.073	34.540	27.631	35.955	57.10	2.562	3057.0	1487.66	2.9
1850.0	1829.0	2.147	2.019	34.550	27.643	36.196	55.98	2.590	3183.8	1488.28	2.2
1900.0	1878.2	2.115	1.983	34.556	27.651	36.431	55.38	2.618	3312.0	1488.99	0.5
1950.0	1927.4	2.080	1.945	34.563	27.659	36.668	54.67	2.646	3441.6	1489.68	1.0
2000.0	1976.6	2.047	1.908	34.569	27.667	36.902	54.05	2.673	3572.5	1490.37	2.2
2050.0	2025.8	2.004	1.861	34.577	27.677	37.140	53.13	2.700	3704.6	1491.03	1.8
2100.0	2075.0	1.966	1.820	34.585	27.686	37.377	52.30	2.726	3838.1	1491.71	1.6
2150.0	2124.2	1.932	1.782	34.590	27.693	37.610	51.71	2.752	3972.8	1492.41	1.6
2200.0	2173.4	1.895	1.741	34.597	27.702	37.846	50.94	2.778	4108.8	1493.09	1.6
2250.0	2222.6	1.864	1.706	34.602	27.708	38.079	50.38	2.803	4245.9	1493.80	1.2
2300.0	2271.7	1.838	1.676	34.607	27.715	38.310	49.88	2.828	4384.3	1494.53	1.8
2350.0	2320.9	1.819	1.653	34.611	27.719	38.541	49.52	2.853	4523.9	1495.29	2.2
2400.0	2370.0	1.788	1.618	34.617	27.727	38.774	48.89	2.878	4664.7	1496.01	1.7
2450.0	2419.1	1.765	1.591	34.621	27.732	39.004	48.47	2.902	4806.6	1496.75	1.3
2500.0	2468.2	1.743	1.565	34.625	27.737	39.234	48.08	2.926	4949.7	1497.50	1.1
2550.0	2517.3	1.724	1.542	34.629	27.742	39.463	47.70	2.950	5094.0	1498.27	1.1
2600.0	2566.4	1.706	1.520	34.632	27.746	39.691	47.41	2.974	5239.4	1499.04	1.1
2650.0	2615.5	1.690	1.500	34.635	27.750	39.919	47.15	2.997	5385.9	1499.81	0.9
2700.0	2664.6	1.674	1.479	34.638	27.753	40.146	46.89	3.021	5533.5	1500.59	1.0
2750.0	2713.6	1.661	1.462	34.640	27.756	40.372	46.73	3.044	5682.3	1501.38	1.0
2800.0	2762.7	1.644	1.441	34.644	27.761	40.600	46.37	3.068	5832.2	1502.16	1.1
2850.0	2811.7	1.629	1.421	34.646	27.764	40.826	46.18	3.091	5983.2	1502.95	0.9
2900.0	2860.7	1.619	1.407	34.647	27.766	41.050	46.12	3.114	6135.3	1503.75	0.0
2950.0	2909.7	1.609	1.392	34.650	27.769	41.275	45.92	3.137	6288.5	1504.56	0.0
3000.0	2958.8	1.594	1.372	34.653	27.773	41.501	45.66	3.160	6442.7	1505.35	0.0
3050.0	3007.8	1.585	1.359	34.654	27.775	41.725	45.60	3.183	6598.1	1506.16	0.0
3100.0	3056.7	1.576	1.345	34.656	27.777	41.949	45.48	3.205	6754.6	1506.97	0.0
3150.0	3105.7	1.567	1.331	34.658	27.780	42.172	45.36	3.228	6912.1	1507.79	0.0
3200.0	3154.7	1.557	1.317	34.659	27.782	42.395	45.29	3.251	7070.7	1508.60	0.0
3250.0	3203.6	1.549	1.304	34.661	27.784	42.618	45.17	3.273	7230.4	1509.42	0.0
3300.0	3252.6	1.543	1.293	34.661	27.785	42.839	45.23	3.296	7391.2	1510.25	-0.0
3350.0	3301.5	1.538	1.283	34.663	27.787	43.061	45.16	3.318	7553.0	1511.08	0.4
3400.0	3350.4	1.533	1.273	34.665	27.789	43.283	45.10	3.341	7715.9	1511.92	0.5
3450.0	3399.4	1.533	1.268	34.665	27.790	43.502	45.23	3.364	7879.8	1512.77	0.0
3500.0	3448.3	1.527	1.257	34.667	27.792	43.723	45.14	3.386	8044.9	1513.60	0.0
3550.0	3497.2	1.524	1.249	34.668	27.793	43.944	45.14	3.409	8211.0	1514.45	0.0
3600.0	3546.0	1.518	1.238	34.668	27.794	44.163	45.19	3.431	8378.1	1515.28	0.0
3650.0	3594.9	1.511	1.226	34.670	27.797	44.384	45.08	3.454	8546.4	1516.11	0.0
3700.0	3643.8	1.504	1.213	34.671	27.798	44.604	45.04	3.476	8715.7	1516.94	0.0
3750.0	3692.6	1.503	1.207	34.672	27.799	44.823	45.08	3.499	8886.0	1517.80	0.0
3800.0	3741.5	1.498	1.197	34.674	27.802	45.043	45.00	3.521	9057.5	1518.64	0.0
3850.0	3790.3	1.497	1.191	34.674	27.802	45.261	45.12	3.544	9229.9	1519.49	0.1
3900.0	3839.1	1.495	1.183	34.675	27.803	45.479	45.16	3.567	9403.5	1520.35	0.2
3950.0	3887.9	1.494	1.177	34.676	27.805	45.697	45.20	3.589	9578.1	1521.20	0.1
4000.0	3936.7	1.492	1.169	34.676	27.805	45.914	45.30	3.612	9753.8	1522.06	0.0
4050.0	3985.5	1.492	1.164	34.677	27.806	46.131	45.35	3.634	9930.5	1522.92	0.2
4100.0	4034.3	1.491	1.157	34.677	27.807	46.348	45.47	3.657	10108.4	1523.78	0.0
4150.0	4083.1	1.492	1.152	34.678	27.808	46.564	45.54	3.680	10287.2	1524.65	-0.0
4200.0	4131.8	1.492	1.147	34.678	27.808	46.780	45.67	3.703	10467.2	1525.51	0.0
4250.0	4180.6	1.492	1.141	34.679	27.809	46.996	45.73	3.725	10648.2	1526.38	0.0
4300.0	4229.3	1.492	1.135	34.679	27.810	47.212	45.85	3.748	10830.3	1527.24	0.2
4350.0	4278.0	1.494	1.132	34.680	27.811	47.427	45.93	3.771	11013.5	1528.12	0.5
4400.0	4326.8	1.495	1.127	34.681	27.812	47.643	46.00	3.794	11197.8	1528.99	-0.2
4450.0	4375.5	1.495	1.121	34.681	27.812	47.857	46.13	3.817	11383.2	1529.86	0.0
4500.0	4424.2	1.497	1.117	34.681	27.813	48.071	46.30	3.840	11569.6	1530.73	0.0
4550.0	4472.9	1.499	1.113	34.682	27.814	48.286	46.37	3.864	11757.1	1531.61	0.0
4600.0	4521.5	1.500	1.108	34.683	27.815	48.501	46.44	3.887	11945.7	1532.49	0.0
4650.0	4570.2	1.504	1.106	34.682	27.814	48.713	46.72	3.910	12135.4	1533.37	0.0
4700.0	4618.8	1.504	1.100	34.684	27.816	48.928	46.69	3.933	12326.2	1534.24	0.0
4750.0	4667.5	1.507	1.097	34.684	27.816	49.140	46.87	3.957	12518.1	1535.12	0.5
4800.0	4716.1	1.509	1.093	34.684	27.817	49.353	47.03	3.980	12711.1	1536.00	-0.1
4850.0	4764.8	1.512	1.090	34.685	27.818	49.566	47.15	4.004	12905.2	1536.89	-0.1
4900.0	4813.4	1.514	1.085	34.684	27.817	49.777	47.36	4.027	13100.4	1537.76	0.5
4950.0	4862.0	1.517	1.082	34.685	27.818	49.990	47.46	4.051	13296.7	1538.65	0.0
5000.0	4910.6	1.521	1.080	34.685	27.818	50.201	47.66	4.075	13494.1	1539.54	0.5
5050.0	4959.2	1.524	1.076	34.686	27.819	50.413	47.77	4.099	13692.6	1540.42	-0.0
5100.0	5007.7	1.527	1.073	34.686	27.819	50.624	47.95	4.123	13892.3	1541.31	-0.0
5150.0	5056.3	1.532	1.072	34.685	27.819	50.834	48.22	4.147	14093.0	1542.20	-0.0
5200.0	5104.8	1.535	1.068	34.686	27.820	51.046	48.33	4.171	14294.9	1543.09	0.0
5250.0	5153.4	1.538	1.065	34.686	27.820	51.256	48.51	4.195	14497.9	1543.97	0.0
5300.0	5201.9	1.541	1.061	34.687	27.821	51.467	48.61	4.219	14702.1	1544.86	0.0
5350.0	5250.4	1.545	1.059	34.688	27.822	51.678	48.74	4.244	14907.4	1545.75	0.2
5400.0	5298.9	1.548	1.055	34.687	27.821	51.887	48.98	4.268	15113.8	1546.64	0.2
5450.0	5347.4	1.550	1.050	34.690	27.824	52.099	48.94	4.292	15321.4	1547.53	-0.0
5500.0	5395.9	1.555	1.049	34.689	27.823	52.307	49.22	4.317	15530.1	1548.42	-0.0
5550.0	5444.4	1.557	1.044	34.689	27.824	52.516	49.39	4.342	15740.0	1549.31	0.2
5600.0	5492.9	1.561	1.041	34.691	27.825	52.726	49.44	4.366	15951.0	1550.20	0.2
5650.0	5541.3	1.562	1.036	34.692	27.827	52.936	49.51	4.391	16163.1	1551.08	0.2
5700.0	5589.8	1.567	1.034	34.692	27.827	53.144	49.72	4.416	16376.5	1551.98	0.2
5750.0	5638.2	1.570	1.030	34.692	27.827	53.352	49.90	4.441	16590.9	1552.87	0.2

CTD REPORT RAMA-4 STATION: 12 CAST: 1 DN
POSITION: 34DEG 30.5MIN N 152DEG 0.2MIN E DATE: 9 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD-1E6
5800.0	5686.7	1.573	1.026	34.693	27.828	53.561	50.00	4.466	16806.5	1553.76	-0.2
5850.0	5735.1	1.578	1.024	34.692	27.827	53.768	50.28	4.491	17023.3	1554.66	0.1
5900.0	5783.5	1.581	1.020	34.693	27.828	53.976	50.41	4.516	17241.3	1555.55	0.0
5950.0	5831.9	1.586	1.018	34.693	27.829	54.183	50.62	4.541	17460.4	1556.45	0.5

CTD REPORT RAMA-4 STATION: 13 CAST: 1 DN
POSITION: 36DEG 26.4MIN N 151DEG 4.8MIN E DATE: 10 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	23.812	23.812	34.403	23.272	23.272	462.21	0.000	0.0	1530.80	
10.0	9.9	23.188	23.186	34.344	23.408	23.451	449.61	0.046	0.2	1529.33	175.3
20.0	19.8	22.416	22.412	34.354	23.636	23.722	428.31	0.090	0.9	1527.53	463.4
30.0	29.8	20.325	20.319	34.567	24.371	24.501	358.58	0.130	2.0	1522.36	493.2
40.0	39.7	19.452	19.445	34.645	24.660	24.834	331.37	0.165	3.5	1520.19	238.0
50.0	49.6	18.650	18.641	34.643	24.864	25.082	312.24	0.197	5.3	1518.08	159.4
60.0	59.5	18.056	18.045	34.612	24.990	25.252	300.61	0.228	7.4	1516.49	175.8
70.0	69.5	16.932	16.920	34.565	25.228	25.535	278.25	0.257	9.8	1513.27	247.7
80.0	79.4	15.720	15.707	34.554	25.502	25.854	252.37	0.284	12.5	1509.71	179.8
90.0	89.3	15.372	15.358	34.578	25.599	25.996	243.40	0.309	15.4	1508.82	84.4
100.0	99.2	15.043	15.028	34.582	25.676	26.118	236.38	0.333	18.6	1507.95	66.7
110.0	109.1	14.724	14.707	34.569	25.736	26.223	230.90	0.356	22.0	1507.08	55.6
120.0	119.1	14.464	14.446	34.565	25.790	26.322	226.07	0.379	25.7	1506.41	57.0
130.0	129.0	14.149	14.130	34.559	25.853	26.430	220.30	0.402	29.6	1505.55	62.9
140.0	138.9	13.755	13.735	34.536	25.919	26.541	214.28	0.424	33.7	1504.40	60.0
150.0	148.8	13.423	13.402	34.520	25.976	26.643	209.11	0.445	38.0	1503.46	54.7
160.0	158.7	13.085	13.063	34.501	26.030	26.743	204.12	0.466	42.5	1502.48	56.2
170.0	168.7	12.687	12.664	34.475	26.090	26.849	198.59	0.486	47.2	1501.27	50.5
180.0	178.6	12.421	12.397	34.462	26.133	26.937	194.74	0.505	52.1	1500.52	47.1
190.0	188.5	12.076	12.051	34.443	26.185	27.035	189.91	0.525	57.2	1499.49	46.3
200.0	198.4	11.769	11.743	34.420	26.226	27.122	186.18	0.544	62.5	1498.57	44.6
210.0	208.3	11.410	11.383	34.396	26.275	27.217	181.67	0.562	68.0	1497.46	36.1
220.0	218.2	11.138	11.110	34.361	26.298	27.286	179.61	0.580	73.7	1496.63	23.9
230.0	228.2	10.795	10.766	34.311	26.321	27.356	177.49	0.598	79.5	1495.53	31.7
240.0	238.1	10.318	10.289	34.252	26.359	27.442	173.87	0.616	85.5	1493.92	46.4
250.0	248.0	10.553	10.522	34.378	26.416	27.542	168.82	0.633	91.7	1495.07	38.6
260.0	257.9	10.356	10.325	34.363	26.439	27.611	166.77	0.650	98.1	1494.52	32.3
270.0	267.8	9.670	9.639	34.262	26.478	27.699	162.98	0.666	104.6	1492.08	34.2
280.0	277.7	9.386	9.354	34.236	26.504	27.772	160.50	0.682	111.3	1491.17	27.8
290.0	287.6	9.335	9.302	34.262	26.533	27.847	157.96	0.698	118.1	1491.18	32.8
300.0	297.6	9.365	9.331	34.318	26.572	27.930	154.52	0.714	125.1	1491.52	32.8
310.0	307.5	9.235	9.200	34.327	26.600	28.005	151.96	0.729	132.3	1491.22	18.5
320.0	317.4	9.128	9.092	34.315	26.608	28.059	151.34	0.744	139.6	1490.97	18.3
330.0	327.3	8.600	8.564	34.240	26.633	28.133	148.81	0.759	147.0	1489.08	24.8
340.0	337.2	8.266	8.230	34.200	26.653	28.201	146.88	0.774	154.6	1487.94	
350.0	347.1	7.556									
360.0	357.0	6.935	6.901	34.009	26.694	28.344	142.29	0.803	170.3	1482.92	
370.0	366.9	6.220	6.187	33.905	26.705	28.408	140.68	0.817	178.3	1480.14	21.0
380.0	376.8	5.811	5.778	33.867	26.726	28.479	138.47	0.832	186.5	1478.62	13.3
390.0	386.7	5.096	5.065	33.755	26.721	28.527	138.34	0.845	194.8	1475.75	5.3
400.0	396.7	4.602	4.571	33.690	26.724	28.582	137.70	0.859	203.2	1473.80	11.8
410.0	406.6	4.285	4.255	33.664	26.737	28.644	136.27	0.873	211.8	1472.61	13.0
420.0	416.5	4.437	4.405	33.699	26.749	28.701	135.39	0.886	220.5	1473.45	14.6
430.0	426.4	4.838	4.804	33.784	26.773	28.766	133.62	0.900	229.4	1475.38	27.0
440.0	436.3	5.012	4.977	33.857	26.812	28.849	130.31	0.913	238.3	1476.35	20.0
450.0	446.2	5.357	5.320	33.918	26.821	28.900	129.95	0.926	247.4	1477.99	22.1
460.0	456.1	6.217	6.175	34.115	26.872	28.986	126.24	0.939	256.7	1481.86	25.1
470.0	466.0	6.070	6.028	34.103	26.881	29.043	125.35	0.952	266.1	1481.42	16.4
480.0	475.9	5.932	5.890	34.108	26.903	29.111	123.35	0.964	275.5	1481.04	24.8
490.0	485.8	5.631	5.589	34.093	26.927	29.186	120.77	0.976	285.2	1479.97	21.8
500.0	495.7	5.739	5.695	34.132	26.945	29.248	119.36	0.989	294.9	1480.62	15.3
510.0	505.6	5.686	5.642	34.142	26.960	29.309	118.06	1.000	304.7	1480.58	14.8
520.0	515.5	5.624	5.579	34.151	26.974	29.370	116.74	1.012	314.7	1480.51	11.6
530.0	525.4	5.585	5.539	34.155	26.982	29.424	116.07	1.024	324.8	1480.52	12.9
540.0	535.3	5.491	5.445	34.162	26.999	29.488	114.49	1.035	335.0	1480.31	18.9
550.0	545.2	5.398	5.351	34.173	27.019	29.555	112.65	1.047	345.3	1480.11	17.1
560.0	555.1	5.374	5.327	34.187	27.033	29.615	111.42	1.058	355.7	1480.19	15.8
570.0	565.0	5.050	5.003	34.157	27.046	29.679	109.82	1.069	366.2	1479.00	14.7
580.0	574.9	4.633	4.587	34.106	27.052	29.737	108.79	1.080	376.9	1477.38	10.4
590.0	584.8	4.629	4.582	34.117	27.061	29.792	108.03	1.091	387.6	1477.54	14.5
600.0	594.7	4.737	4.689	34.160	27.084	29.859	106.19	1.102	398.5	1478.21	17.8
610.0	604.6	4.747	4.698	34.182	27.100	29.921	104.77	1.112	409.4	1478.44	12.3
620.0	614.5	4.783	4.733	34.199	27.110	29.976	104.03	1.123	420.5	1478.77	8.3
630.0	624.4	4.766	4.715	34.206	27.117	30.030	103.41	1.133	431.6	1478.87	10.3
640.0	634.3	4.667	4.616	34.207	27.129	30.089	102.28	1.143	442.9	1478.63	16.1
650.0	644.2	4.558	4.507	34.215	27.147	30.155	100.49	1.153	454.3	1478.35	12.5
660.0	654.1	4.467	4.415	34.208	27.151	30.206	100.05	1.163	465.7	1478.13	6.7
670.0	664.0	4.476	4.424	34.219	27.159	30.260	99.44	1.173	477.3	1478.35	10.9
680.0	673.9	4.390	4.337	34.224	27.172	30.321	98.16	1.183	489.0	1478.16	14.1
690.0	683.8	4.226	4.173	34.217	27.184	30.381	96.89	1.193	500.7	1477.63	13.3
700.0	693.7	3.709	3.658	34.156	27.187	30.440	95.78	1.203	512.6	1475.55	10.4
710.0	703.6	3.651	3.600	34.158	27.194	30.494	95.07	1.212	524.5	1475.47	8.1
720.0	713.5	3.602	3.551	34.161	27.201	30.548	94.40	1.222	536.6	1475.43	8.9
730.0	723.4	3.499	3.447	34.159	27.209	30.605	93.52	1.231	548.7	1475.15	7.3
740.0	733.3	3.484	3.432	34.163	27.214	30.656	93.14	1.240	560.9	1475.26	10.5
750.0	743.2	3.448	3.395	34.179	27.230	30.719	91.64	1.250	573.2	1475.29	12.8
760.0	753.1	3.421	3.368	34.187	27.239	30.774	90.83	1.259	585.7	1475.35	12.1
770.0	763.0	3.508	3.453	34.219	27.256	30.836	89.45	1.268	598.1	1475.92	10.5
780.0	772.9	3.674	3.617	34.251	27.266	30.888	88.95	1.277	610.7	1476.83	6.0
790.0	782.8	3.819	3.761	34.280	27.275	30.940	88.49	1.286	623.4	1477.64	7.2
800.0	792.6	3.873	3.813	34.299	27.285	30.994	87.76	1.294	636.2	1478.05	9.4
810.0	802.5	3.624	3.565	34.275	27.290	31.051	86.86	1.303	649.0	1477.14	14.5
820.0	812.4	3.767	3.706	34.321	27.313	31.116	85.12	1.312	661.9	1477.96	13.8
830.0	822.3	3.701	3.640	34.322	27.321	31.171	84.36	1.320	675.0	1477.85	8.5
840.0	832.2	3.447	3.387	34.295	27.323	31.225	83.66	1.329	688.1	1476.90	9.3
850.0	842.1	3.442	3.381	34.308	27.334	31.282	82.71	1.337	701.2	1477.06	
860.0	852.0	3.348									
870.0	861.9	3.357	3.295	34.320	27.352	31.394	81.05	1.354	727.9	1477.04	
880.0	871.8	3.424	3.361	34.343	27.364	31.450	80.13	1.362	741.3	1477.52	8.3
890.0	881.6	3.418	3.354	34.350	27.370	31.502	79.62	1.370	754.8	1477.67	5.8
900.0	891.5	3.430	3.365	34.359	27.376	31.554	79.15	1.378	768.4	1477.89	6.0
910.0	901.4	3.390	3.325	34.361	27.382	31.606	78.64	1.385	782.0	1477.89	3.3
920.0	911.3	3.388	3.322	34.361	27.382	31.652	78.70	1.393	795.8	1478.04	5.3
930.0	921.2	3.367	3.300	34.371	27.392	31.709	77.80	1.401	809.6	1478.13	7.7
940.0	931.1	3.343	3.276	34.374	27.396	31.760	77.38	1.409	823.5	1478.20	5.3
950.0	941.0	3.324	3.256	34.378	27.401	31.811	76.94	1.417	837.4	1478.28	6.3
960.0	950.9	3.316	3.247	34.386	27.409	31.864	76.33	1.424	851.5	1478.42	5.6
970.0	960.7	3.293	3.224	34.388	27.412	31.915	76.00	1.432	865.6	1478.49	4.0

28 JAN 81

CTD REPORT RAMA-4 STATION: 13 CAST 1 DN
POSITION: 36DEG 26.4MIN N 151DEG 4.8MIN E DATE: 10 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	S'LINITY O/( )	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.254	3.184	34.387	27.415	31.964	75.72	1.439	879.8	1478.49	5.2
990.0	980.5	3.211	3.141	34.389	27.421	32.017	75.17	1.447	894.0	1478.47	7.1
1000.0	990.4	3.164	3.094	34.392	27.427	32.071	74.49	1.455	908.4	1478.44	7.4
1050.0	1039.8	3.005	2.932	34.410	27.456	32.333	71.75	1.491	981.2	1478.60	6.2
1100.0	1089.2	3.095	3.017	34.450	27.480	32.584	70.11	1.526	1055.7	1479.86	4.8
1150.0	1138.6	3.043	2.962	34.466	27.498	32.832	68.66	1.561	1131.9	1480.48	2.4
1200.0	1188.0	2.771	2.688	34.450	27.509	33.080	67.15	1.595	1209.9	1480.11	5.2
1250.0	1237.3	2.675	2.589	34.469	27.533	33.336	64.97	1.628	1289.4	1480.54	2.8
1300.0	1286.7	2.611	2.522	34.477	27.545	33.578	63.96	1.660	1370.6	1481.10	4.7
1350.0	1336.0	2.521	2.429	34.488	27.561	33.826	62.42	1.692	1453.3	1481.55	0.9
1400.0	1385.4	2.455	2.360	34.499	27.576	34.071	61.14	1.723	1537.5	1482.10	2.9
1450.0	1434.7	2.383	2.285	34.513	27.593	34.319	59.57	1.753	1623.3	1482.63	4.4
1500.0	1484.0	2.338	2.236	34.519	27.602	34.557	58.87	1.783	1710.4	1483.27	0.8

CTD REPORT RAMA-4 STATION: 14 CAST: 1 DN
POSITION: 36DEG 11.2MIN N 150DEG 60.0MIN E DATE: 11 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	24.609	24.609	34.504	23.114	23.114	477.31	0.000	0.0	1532.87	
10.0	9.9	24.665	24.663	34.505	23.098	23.141	479.21	0.048	0.2	1533.16	-6.9
20.0	19.8	24.665	24.660	34.505	23.099	23.185	479.60	0.096	0.9	1533.33	242.4
30.0	29.8	23.585	23.578	34.750	23.602	23.730	432.03	0.142	2.1	1531.10	347.8
40.0	39.7	22.889	22.881	34.775	23.821	23.993	411.47	0.184	3.8	1529.53	159.1
50.0	49.6	22.508	22.498	34.777	23.932	24.147	401.37	0.225	5.8	1528.72	149.2
60.0	59.5	21.825	21.813	34.786	24.130	24.389	382.79	0.265	8.2	1527.12	179.2
70.0	69.5	21.228	21.214	34.796	24.303	24.605	366.70	0.302	11.0	1525.72	170.0
80.0	79.4	20.159	20.144	34.652	24.482	24.828	349.96	0.339	14.2	1522.82	181.1
90.0	89.3	19.773	19.756	34.775	24.678	25.068	331.69	0.373	17.7	1522.05	192.4
100.0	99.2	18.819	18.801	34.716	24.879	25.315	312.72	0.405	21.6	1519.46	132.3
110.0	109.1	18.574	18.554	34.727	24.950	25.429	306.31	0.436	25.8	1518.94	88.8
120.0	119.1	18.195	18.174	34.749	25.063	25.586	295.95	0.466	30.3	1518.03	105.7
130.0	129.0	17.787	17.764	34.755	25.168	25.736	286.17	0.496	35.0	1517.01	79.0
140.0	138.9	17.482	17.458	34.731	25.225	25.837	281.07	0.524	40.1	1516.25	65.6
150.0	148.8	17.099	17.074	34.711	25.303	25.959	273.98	0.552	45.4	1515.25	68.4
160.0	158.7	16.742	16.715	34.681	25.365	26.067	268.30	0.579	51.0	1514.30	65.8
170.0	168.7	16.458	16.430	34.688	25.438	26.184	261.68	0.606	56.9	1513.61	60.7
180.0	178.6	16.207	16.178	34.679	25.490	26.280	257.02	0.631	63.0	1513.00	44.8
190.0	188.5	15.998	15.967	34.667	25.529	26.364	253.56	0.657	69.4	1512.50	34.2
200.0	198.4	15.825	15.793	34.654	25.559	26.439	250.97	0.682	76.1	1512.12	36.7
210.0	208.3	15.567	15.534	34.635	25.603	26.528	247.00	0.707	83.0	1511.46	54.0
220.0	218.2	15.229	15.195	34.621	25.669	26.639	241.01	0.732	90.1	1510.55	66.6
230.0	228.2	14.852	14.817	34.603	25.738	26.754	234.54	0.755	97.5	1509.49	70.7
240.0	238.1	14.423	14.387	34.577	25.812	26.874	227.71	0.779	105.1	1508.26	64.8
250.0	248.0	14.040	14.003	34.545	25.869	26.977	222.41	0.801	112.9	1507.14	56.1
260.0	257.9	13.653	13.615	34.511	25.924	27.078	217.28	0.823	121.0	1506.00	63.9
270.0	267.8	13.231	13.193	34.493	25.997	27.198	210.43	0.845	129.2	1504.75	52.7
280.0	277.7	13.035	12.996	34.484	26.030	27.276	207.50	0.866	137.7	1504.25	40.4
290.0	287.6	12.738	12.698	34.469	26.079	27.370	203.06	0.886	146.4	1503.40	28.9
300.0	297.6	12.645	12.604	34.457	26.088	27.425	202.39	0.907	155.3	1503.24	17.6
310.0	307.5	12.491	12.449	34.450	26.113	27.495	200.19	0.927	164.4	1502.87	40.8
320.0	317.4	12.090	12.047	34.421	26.169	27.598	194.94	0.947	173.6	1501.63	43.3
330.0	327.3	11.852	11.808	34.401	26.199	27.674	192.21	0.966	183.1	1500.96	35.2
340.0	337.2	11.567	11.523	34.382	26.238	27.760	188.59	0.985	192.8	1500.11	33.2
350.0	347.1	11.506	11.460	34.402	26.265	27.832	186.23	1.004	202.6	1500.09	27.9
360.0	357.0	11.315	11.269	34.393	26.293	27.907	183.64	1.022	212.7	1499.58	26.1
370.0	366.9	11.125	11.078	34.377	26.316	27.975	181.62	1.041	222.9	1499.05	27.8
380.0	376.8	10.886	10.838	34.362	26.348	28.054	178.67	1.059	233.3	1498.36	29.4
390.0	386.7	10.700	10.652	34.352	26.373	28.126	176.35	1.077	243.9	1497.85	24.3
400.0	396.7	10.370	10.321	34.303	26.393	28.193	174.40	1.094	254.6	1496.78	23.8
410.0	406.6	10.235	10.185	34.305	26.418	28.264	172.15	1.111	265.6	1496.46	29.9
420.0	416.5	10.048	9.998	34.307	26.452	28.345	169.03	1.129	276.7	1495.95	41.9
430.0	426.4	9.866	9.815	34.331	26.502	28.441	164.39	1.145	287.9	1495.49	42.1
440.0	436.3	9.566	9.515	34.309	26.535	28.522	161.22	1.162	299.4	1494.53	36.2
450.0	446.2	9.190	9.139	34.275	26.570	28.605	157.76	1.178	310.9	1493.27	33.1
460.0	456.1	8.621	8.571	34.190	26.593	28.680	155.16	1.193	322.7	1491.22	27.0
470.0	466.0	8.055	8.006	34.106	26.613	28.752	152.86	1.209	334.6	1489.14	23.0
480.0	475.9	7.385	7.337	34.000	26.626	28.818	151.03	1.224	346.6	1486.61	22.6
490.0	485.8	8.172	8.120	34.190	26.662	28.889	148.77	1.239	358.8	1490.02	24.7
500.0	495.7	8.459	8.405	34.282	26.691	28.960	146.59	1.254	371.2	1491.38	29.1
510.0	505.6	8.053	7.999	34.242	26.720	29.040	143.48	1.268	383.6	1489.96	23.5
520.0	515.5	7.541	7.488	34.156	26.727	29.099	142.38	1.282	396.3	1488.06	24.3
530.0	525.4	6.411	6.362	33.989	26.749	29.181	139.08	1.297	409.0	1483.61	31.2
540.0	535.3	6.054	6.006	33.961	26.772	29.254	136.57	1.310	422.0	1482.32	22.2
550.0	545.2	6.193	6.143	34.008	26.792	29.318	135.03	1.324	435.0	1483.09	18.6
560.0	555.1	6.325	6.273	34.058	26.815	29.384	133.22	1.337	448.2	1483.84	16.6
570.0	565.0	6.056	6.005	34.027	26.824	29.443	132.08	1.351	461.5	1482.90	16.6
580.0	574.9	5.867	5.816	34.020	26.842	29.509	130.27	1.364	474.9	1482.29	18.5
590.0	584.8	5.705	5.654	34.014	26.857	29.573	128.77	1.377	488.5	1481.80	19.4
600.0	594.7	5.724	5.671	34.046	26.880	29.641	126.76	1.390	502.2	1482.08	18.9
610.0	604.6	5.556	5.503	34.038	26.894	29.703	125.32	1.402	516.0	1481.55	18.4
620.0	614.5	5.454	5.401	34.048	26.914	29.770	123.43	1.415	529.9	1481.32	17.4
630.0	624.4	5.209	5.156	34.025	26.924	29.830	122.20	1.427	544.0	1480.46	13.3
640.0	634.3	5.104	5.051	34.024	26.936	29.889	121.09	1.439	558.2	1480.19	16.8
650.0	644.2	4.932	4.879	34.023	26.954	29.956	119.17	1.451	572.5	1479.65	16.4
660.0	654.1	4.859	4.805	34.027	26.966	30.015	118.11	1.463	586.9	1479.52	18.0
670.0	664.0	4.733	4.679	34.038	26.988	30.085	115.90	1.475	601.4	1479.18	20.8
680.0	673.9	4.627	4.573	34.044	27.004	30.149	114.29	1.486	616.1	1478.91	11.1
690.0	683.8	4.547	4.493	34.037	27.007	30.200	113.96	1.498	630.9	1478.73	11.9
700.0	693.7	4.535	4.480	34.060	27.027	30.265	112.21	1.509	645.7	1478.88	13.3
710.0	703.6	4.334	4.279	34.038	27.031	30.319	111.60	1.520	660.7	1478.18	14.7
720.0	713.5	4.538	4.481	34.099	27.058	30.388	109.54	1.531	675.8	1479.26	14.4
730.0	723.4	4.516	4.458	34.104	27.064	30.440	109.02	1.542	691.0	1479.34	9.3
740.0	733.3	4.545	4.486	34.124	27.077	30.498	107.97	1.553	706.3	1479.65	15.5
750.0	743.2	4.451	4.392	34.134	27.095	30.564	106.20	1.564	721.8	1479.44	17.5
760.0	753.1	4.414	4.354	34.149	27.111	30.626	104.76	1.574	737.3	1479.47	16.7
770.0	763.0	4.454	4.393	34.178	27.130	30.690	103.18	1.585	752.9	1479.83	17.3
780.0	772.9	4.452	4.390	34.200	27.148	30.753	101.61	1.595	768.6	1480.02	11.9
790.0	782.8	4.423	4.361	34.204	27.154	30.806	101.07	1.605	784.5	1480.06	8.3
800.0	792.6	4.337	4.274	34.203	27.162	30.862	100.22	1.615	800.4	1479.87	14.7
810.0	802.5	4.201	4.138	34.207	27.179	30.928	98.42	1.625	816.4	1479.47	16.9
820.0	812.4	4.134	4.071	34.215	27.193	30.988	97.14	1.635	832.5	1479.37	7.1
830.0	822.3	4.135	4.071	34.215	27.193	31.034	97.24	1.645	848.8	1479.53	3.8
840.0	832.2	4.187	4.122	34.233	27.202	31.088	96.61	1.654	865.1	1479.94	10.4
850.0	842.1	4.162	4.096	34.246	27.215	31.147	95.43	1.664	881.5	1480.01	10.4
860.0	852.0	4.080	4.014	34.243	27.221	31.201	94.80	1.674	898.0	1479.83	11.6
870.0	861.9	3.950	3.884	34.243	27.234	31.262	93.38	1.683	914.6	1479.45	15.2
880.0	871.8	3.870	3.804	34.250	27.247	31.324	92.03	1.692	931.3	1479.28	12.8
890.0	881.6	3.845	3.778	34.260	27.258	31.380	91.09	1.701	948.0	1479.36	11.3
900.0	891.5	3.855	3.787	34.277	27.270	31.439	90.00	1.710	964.9	1479.58	10.9
910.0	901.4	3.793	3.725	34.280	27.279	31.494	89.16	1.719	981.8	1479.49	10.9
920.0	911.3	3.724	3.656	34.285	27.290	31.552	88.10	1.728	998.9	1479.37	11.2
930.0	921.2	3.675	3.606	34.291	27.299	31.609	87.17	1.737	1016.0	1479.33	10.5
940.0	931.1	3.625	3.556	34.297	27.309	31.666	86.24	1.746	1033.2	1479.29	8.6
950.0	941.0	3.591	3.521	34.300	27.314	31.718	85.69	1.754	1050.5	1479.32	7.3
960.0	950.9	3.548	3.478	34.304	27.322	31.772	84.98	1.763	1067.9	1479.30	7.4
970.0	960.7	3.510	3.439	34.307	27.328	31.825	84.42	1.771	1085.4	1479.31	8.9

CTD REPORT RAMA-4 STATION: 14 CAST: 1 DN
POSITION: 36DEG 11.2MIN N 150DEG 60.0MIN E DATE: 11 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.449	3.378	34.312	27.338	31.882	83.43	1.780	1102.9	1479.22	10.7
990.0	980.5	3.512	3.440	34.335	27.350	31.939	82.52	1.788	1120.6	1479.68	8.9
1000.0	990.4	3.470	3.397	34.338	27.356	31.992	81.88	1.796	1138.3	1479.67	7.3
1050.0	1039.8	3.324	3.248	34.349	27.379	32.247	79.80	1.837	1228.0	1479.89	5.2
1100.0	1089.2	3.177	3.099	34.375	27.413	32.515	76.57	1.876	1319.7	1480.11	6.0
1150.0	1138.6	2.938	2.858	34.383	27.441	32.779	73.65	1.913	1413.3	1479.92	7.1
1200.0	1188.0	2.903	2.819	34.415	27.470	33.037	71.19	1.950	1508.7	1480.63	4.6
1250.0	1237.3	2.859	2.771	34.434	27.489	33.286	69.59	1.985	1605.8	1481.29	4.2
1300.0	1286.7	2.744	2.654	34.443	27.507	33.536	67.94	2.019	1704.6	1481.63	5.4
1350.0	1336.0	2.665	2.572	34.455	27.523	33.783	66.45	2.053	1805.1	1482.13	4.4
1400.0	1385.4	2.613	2.516	34.469	27.539	34.029	65.11	2.086	1907.2	1482.75	2.7
1450.0	1434.7	2.549	2.449	34.477	27.551	34.271	64.08	2.118	2010.9	1483.30	5.5
1500.0	1484.0	2.472	2.369	34.490	27.568	34.519	62.50	2.150	2116.2	1483.81	3.3
1550.0	1533.3	2.400	2.293	34.501	27.583	34.764	61.12	2.181	2222.9	1484.34	3.8

CTD REPORT RAMA-4 STATION: 15 CAST: 1 DN
POSITION 35DEG 0.8MIN N 151DEG 12.0MIN E DATE: 11 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	24.475	24.475	34.384	23.063	23.063	482.17	0.000	0.0	1532.41	
10.0	9.9	24.497	24.495	34.387	23.059	23.102	482.95	0.048	0.2	1532.63	7.3
20.0	19.8	24.498	24.494	34.411	23.078	23.163	481.64	0.097	1.0	1532.82	100.4
30.0	29.8	24.117	24.110	34.513	23.268	23.396	463.95	0.144	2.2	1532.16	220.4
40.0	39.7	23.592	23.583	34.664	23.535	23.707	438.80	0.190	3.8	1531.19	315.5
50.0	49.6	22.093	22.083	34.610	23.922	24.137	402.26	0.232	5.9	1527.47	331.3
60.0	59.5	21.116	21.104	34.650	24.222	24.481	373.98	0.271	8.4	1525.09	177.3
70.0	69.5	20.940	20.926	34.675	24.290	24.592	367.95	0.308	11.3	1524.81	121.5
80.0	79.4	20.519	20.503	34.768	24.474	24.820	350.74	0.344	14.5	1523.94	210.1
90.0	89.3	19.614	19.597	34.782	24.724	25.115	327.19	0.378	18.1	1521.62	186.4
100.0	99.2	19.188	19.170	34.814	24.860	25.294	314.66	0.411	22.0	1520.62	96.0
110.0	109.1	18.896	18.876	34.798	24.923	25.401	308.99	0.442	26.2	1519.94	62.7
120.0	119.1	18.524	18.502	34.760	24.989	25.511	303.05	0.473	30.8	1518.99	85.0
130.0	129.0	18.084	18.061	34.758	25.097	25.665	292.98	0.503	35.6	1517.88	89.0
140.0	138.9	17.890	17.865	34.792	25.172	25.783	286.23	0.532	40.7	1517.52	60.8
150.0	148.8	17.669	17.643	34.787	25.223	25.878	281.72	0.560	46.2	1517.03	47.4
160.0	158.7	17.477	17.449	34.786	25.269	25.969	277.63	0.588	51.9	1516.62	44.3
170.0	168.7	17.336	17.307	34.799	25.314	26.057	273.70	0.616	57.8	1516.38	48.6
180.0	178.6	17.080	17.049	34.790	25.369	26.157	268.76	0.643	64.1	1515.77	33.6
190.0	188.5	17.029	16.997	34.791	25.382	26.214	267.83	0.670	70.6	1515.78	14.4
200.0	198.4	16.955	16.921	34.788	25.398	26.274	266.65	0.696	77.3	1515.72	13.1
210.0	208.3	16.934	16.899	34.795	25.409	26.328	265.98	0.723	84.4	1515.83	9.0
220.0	218.2	16.895	16.858	34.792	25.416	26.379	265.61	0.750	91.7	1515.87	10.3
230.0	228.2	16.805	16.766	34.781	25.430	26.437	264.66	0.776	99.2	1515.75	14.8
240.0	238.1	16.749	16.709	34.785	25.446	26.497	263.40	0.803	107.1	1515.75	14.2
250.0	248.0	16.722	16.680	34.792	25.458	26.553	262.59	0.829	115.2	1515.84	9.9
260.0	257.9	16.691	16.647	34.792	25.466	26.605	262.19	0.855	123.5	1515.91	6.4
270.0	267.8	16.664	16.619	34.790	25.471	26.654	262.03	0.881	132.1	1515.99	5.3
280.0	277.7	16.646	16.599	34.791	25.477	26.703	261.86	0.908	141.0	1516.10	8.3
290.0	287.6	16.569	16.521	34.781	25.488	26.758	261.14	0.934	150.1	1516.02	13.5
300.0	297.6	16.441	16.391	34.762	25.503	26.818	259.91	0.960	159.5	1515.77	13.9
310.0	307.5	16.347	16.296	34.748	25.515	26.874	259.10	0.986	169.1	1515.63	15.9
320.0	317.4	16.207	16.154	34.731	25.535	26.938	257.49	1.012	179.0	1515.35	25.4
330.0	327.3	15.983	15.929	34.703	25.565	27.014	254.81	1.037	189.2	1514.79	34.4
340.0	337.2	15.659	15.605	34.655	25.603	27.097	251.40	1.063	199.6	1513.90	41.3
350.0	347.1	15.415	15.360	34.641	25.647	27.187	247.35	1.088	210.2	1513.28	50.5
360.0	357.0	15.087	15.031	34.619	25.704	27.289	242.13	1.112	221.1	1512.39	38.7
370.0	366.9	14.953	14.896	34.607	25.724	27.355	240.39	1.136	232.3	1512.11	22.5
380.0	376.8	14.807	14.748	34.596	25.748	27.424	238.34	1.160	243.7	1511.80	33.7
390.0	386.7	14.564	14.505	34.583	25.791	27.512	234.41	1.184	255.3	1511.17	39.4
400.0	396.7	14.348	14.288	34.568	25.826	27.593	231.23	1.207	267.1	1510.62	38.3
410.0	406.6	14.111	14.050	34.555	25.867	27.680	227.49	1.230	279.2	1510.00	48.3
420.0	416.5	13.785	13.723	34.537	25.922	27.781	222.35	1.253	291.5	1509.08	44.2
430.0	426.4	13.561	13.498	34.518	25.954	27.859	219.42	1.275	304.0	1508.49	33.5
440.0	436.3	13.332	13.269	34.500	25.987	27.939	216.36	1.297	316.8	1507.88	42.3
450.0	446.2	13.046	12.982	34.489	26.037	28.035	211.69	1.318	329.7	1507.08	42.2
460.0	456.1	12.798	12.734	34.467	26.070	28.114	208.65	1.339	342.9	1506.38	34.2
470.0	466.0	12.570	12.505	34.452	26.104	28.195	205.53	1.360	356.2	1505.76	39.2
480.0	475.9	12.251	12.186	34.426	26.146	28.284	201.51	1.381	369.8	1504.81	34.7
490.0	485.8	12.060	11.994	34.410	26.170	28.355	199.27	1.401	383.6	1504.30	37.9
500.0	495.7	11.720	11.654	34.389	26.219	28.451	194.62	1.420	397.6	1503.27	48.5
510.0	505.6	11.339	11.273	34.355	26.263	28.544	190.28	1.440	411.7	1502.07	41.8
520.0	515.5	11.084	11.017	34.340	26.298	28.627	186.94	1.458	426.1	1501.32	41.8
530.0	525.4	10.752	10.685	34.321	26.343	28.720	182.58	1.477	440.6	1500.29	41.2
540.0	535.3	10.483	10.416	34.303	26.377	28.801	179.34	1.495	455.3	1499.47	33.7
550.0	545.2	10.255	10.188	34.291	26.407	28.879	176.44	1.513	470.2	1498.81	35.3
560.0	555.1	9.923	9.856	34.264	26.443	28.964	172.90	1.530	485.3	1497.74	38.4
570.0	565.0	9.673	9.606	34.257	26.479	29.048	169.37	1.548	500.5	1496.99	29.7
580.0	574.9	9.718	9.649	34.295	26.502	29.115	167.55	1.564	515.9	1497.36	32.5
590.0	584.8	9.589	9.520	34.324	26.546	29.205	163.46	1.581	531.5	1497.09	47.9
600.0	594.7	8.841	8.774	34.225	26.589	29.303	158.61	1.597	547.2	1494.37	28.0
610.0	604.6	8.393	8.327	34.134	26.587	29.353	158.37	1.613	563.1	1492.74	23.1
620.0	614.5	7.757	7.693	34.057	26.620	29.441	154.48	1.629	579.2	1490.40	29.6
630.0	624.4	6.452	6.393	33.827	26.617	29.504	152.95	1.644	595.4	1485.20	17.2
640.0	634.3	6.407	6.348	33.841	26.634	29.567	151.43	1.659	611.7	1485.20	19.9
650.0	644.2	5.919	5.861	33.783	26.650	29.637	149.33	1.674	628.2	1483.35	8.1
660.0	654.1	6.733	6.670	33.923	26.657	29.675	150.12	1.689	644.9	1486.91	27.5
670.0	664.0	7.107	7.041	34.076	26.727	29.784	144.29	1.704	661.6	1488.73	33.2
680.0	673.9	7.166	7.098	34.094	26.733	29.835	143.96	1.718	678.6	1489.15	8.1
690.0	683.8	7.280	7.211	34.131	26.747	29.891	143.05	1.733	695.7	1489.80	19.0
700.0	693.7	7.135	7.065	34.138	26.772	29.964	140.57	1.747	712.9	1489.41	33.5
710.0	703.6	6.933	6.863	34.151	26.810	30.051	136.85	1.761	730.2	1488.80	30.7
720.0	713.5	6.667	6.598	34.128	26.828	30.118	134.91	1.774	747.7	1487.89	23.7
730.0	723.4	6.293	6.225	34.092	26.848	30.191	132.53	1.788	765.3	1486.53	27.3
740.0	733.3	5.377	5.314	33.966	26.860	30.266	129.85	1.801	783.1	1482.86	17.8
750.0	743.2	4.835	4.774	33.884	26.856	30.319	129.31	1.814	801.0	1480.71	13.5
760.0	753.1	5.554	5.488	34.032	26.891	30.385	127.47	1.827	819.0	1483.99	11.6
770.0	763.0	5.525	5.458	34.031	26.894	30.434	127.30	1.839	837.1	1484.03	20.8
780.0	772.9	5.544	5.476	34.085	26.935	30.519	123.67	1.852	855.4	1484.34	27.0
790.0	782.8	5.566	5.497	34.109	26.951	30.580	122.30	1.864	873.8	1484.62	16.9
800.0	792.6	5.480	5.410	34.117	26.968	30.644	120.70	1.876	892.3	1484.45	18.6
810.0	802.5	5.334	5.264	34.117	26.985	30.710	118.94	1.888	910.9	1484.02	19.3
820.0	812.4	5.235	5.165	34.125	27.003	30.775	117.19	1.900	929.6	1483.79	20.2
830.0	822.3	5.002	4.933	34.113	27.019	30.843	115.24	1.912	948.5	1482.99	15.4
840.0	832.2	4.887	4.817	34.106	27.027	30.898	114.43	1.923	967.4	1482.67	9.7
850.0	842.1	4.753	4.683	34.096	27.034	30.954	113.61	1.935	986.5	1482.22	17.8
860.0	852.0	4.172	4.106	34.036	27.047	31.026	111.20	1.946	1005.7	1479.95	18.1
870.0	861.9	4.251	4.183	34.062	27.060	31.083	110.27	1.957	1025.0	1480.47	6.3
880.0	871.8	4.070	4.003	34.036	27.057	31.131	110.17	1.968	1044.4	1479.85	15.1
890.0	881.6	4.427	4.356	34.130	27.096	31.206	107.51	1.979	1063.9	1481.62	14.4
900.0	891.5	4.557	4.484	34.152	27.100	31.252	107.55	1.990	1083.6	1482.35	16.3
910.0	901.4	4.636	4.562	34.207	27.135	31.330	104.56	2.001	1103.3	1482.91	24.3
920.0	911.3	4.603	4.528	34.223	27.151	31.393	103.07	2.011	1123.1	1482.96	19.9
930.0	921.2	4.140	4.068	34.178	27.164	31.463	100.90	2.021	1143.0	1481.14	15.4
940.0	931.1	3.731	3.661	34.124	27.161	31.517	100.24	2.031	1163.1	1479.52	8.2
950.0	941.0	3.731	3.660	34.135	27.170	31.571	99.49	2.041	1183.2	1479.70	11.3
960.0	950.9	3.884	3.811	34.177	27.189	31.631	98.23	2.051	1203.4	1480.56	12.2
970.0	960.7	4.063	3.988	34.219	27.204	31.688	97.30	2.061	1223.8	1481.53	12.0

CTD REPORT RAMA-4 STATION: 15 CAST: 1 DN
POSITION: 35DEG 0.8MIN N 151DEG 12.0MIN E DATE: 11 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.996	3.921	34.226	27.217	31.748	96.08	2.071	1244.2	1481.42	13.5
990.0	980.5	3.937	3.861	34.234	27.229	31.807	94.88	2.080	1264.7	1481.35	13.6
1000.0	990.4	3.868	3.792	34.241	27.241	31.867	93.63	2.090	1285.3	1481.23	11.4
1050.0	1039.8	3.760	3.681	34.277	27.281	32.138	90.10	2.136	1389.7	1481.64	6.6
1100.0	1089.2	3.584	3.502	34.293	27.311	32.401	87.25	2.180	1496.3	1481.74	10.0
1150.0	1138.6	3.413	3.328	34.319	27.348	32.671	83.73	2.223	1605.0	1481.87	6.0
1200.0	1188.0	3.272	3.185	34.343	27.380	32.936	80.67	2.264	1715.8	1482.12	5.5
1250.0	1237.3	3.152	3.062	34.364	27.408	33.196	78.08	2.303	1828.5	1482.46	5.7
1300.0	1286.7	3.015	2.922	34.387	27.439	33.459	75.13	2.342	1943.2	1482.72	6.1
1350.0	1336.0	2.920	2.824	34.404	27.461	33.712	73.10	2.379	2059.6	1483.16	3.7
1400.0	1385.4	2.846	2.746	34.418	27.479	33.960	71.51	2.415	2177.9	1483.69	5.2
1450.0	1434.7	2.763	2.660	34.436	27.500	34.213	69.53	2.450	2297.9	1484.18	5.8
1500.0	1484.0	2.674	2.568	34.451	27.520	34.463	67.69	2.485	2419.6	1484.64	5.0
1550.0	1533.3	2.590	2.481	34.468	27.541	34.714	65.73	2.518	2542.9	1485.12	3.4
1600.0	1582.6	2.502	2.390	34.479	27.557	34.961	64.17	2.550	2667.8	1485.59	3.1

CTD REPORT RAMA-4 STATION: 16 CAST: 1 DN
POSITION: 34DEG 7.9MIN N 151DEG 11.0MIN E DATE: 11 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	24.690	24.690	34.531	23.110	23.110	477.67	0.000	0.0	1533.09	
10.0	9.9	24.694	24.692	34.550	23.124	23.167	476.79	0.048	0.2	1533.28	8.3
20.0	19.8	24.689	24.684	34.551	23.127	23.212	476.97	0.095	0.9	1533.43	21.9
30.0	29.8	24.577	24.570	34.562	23.169	23.297	473.38	0.143	2.1	1533.34	81.2
40.0	39.7	24.180	24.171	34.573	23.295	23.466	461.77	0.190	3.8	1532.54	115.7
50.0	49.6	23.816	23.805	34.582	23.409	23.623	451.33	0.236	5.9	1531.82	241.5
60.0	59.5	22.646	22.633	34.648	23.796	24.053	414.78	0.280	8.5	1529.10	309.9
70.0	69.5	21.754	21.740	34.655	24.051	24.353	390.73	0.321	11.4	1526.95	224.2
80.0	79.4	21.098	21.082	34.692	24.260	24.605	371.19	0.359	14.8	1525.42	256.1
90.0	89.3	19.989	19.972	34.723	24.581	24.971	340.88	0.395	18.6	1522.59	223.2
100.0	99.2	19.617	19.598	34.779	24.722	25.156	327.84	0.428	22.6	1521.79	106.9
110.0	109.1	19.194	19.174	34.740	24.802	25.280	320.51	0.461	27.0	1520.72	99.1
120.0	119.1	18.495	18.473	34.668	24.926	25.449	309.01	0.492	31.8	1518.81	125.3
130.0	129.0	17.952	17.929	34.666	25.060	25.627	296.51	0.523	36.8	1517.39	121.9
140.0	138.9	17.514	17.490	34.678	25.177	25.789	285.67	0.552	42.1	1516.28	94.4
150.0	148.8	17.227	17.201	34.688	25.254	25.911	278.62	0.580	47.8	1515.60	69.3
160.0	158.7	16.910	16.883	34.673	25.319	26.020	272.73	0.608	53.7	1514.80	69.4
170.0	168.7	16.690	16.662	34.706	25.397	26.142	265.61	0.635	59.8	1514.34	71.8
180.0	178.6	16.073	16.044	34.607	25.465	26.257	259.27	0.661	66.2	1512.50	71.8
190.0	188.5	15.727	15.697	34.604	25.543	26.379	252.16	0.687	72.9	1511.59	72.2
200.0	198.4	15.453	15.421	34.615	25.613	26.494	245.69	0.712	79.9	1510.91	68.6
210.0	208.3	15.170	15.137	34.623	25.683	26.609	239.30	0.736	87.1	1510.20	54.5
220.0	218.2	15.036	15.002	34.638	25.725	26.695	235.63	0.760	94.5	1509.96	37.7
230.0	228.2	14.887	14.852	34.641	25.760	26.775	232.53	0.783	102.1	1509.65	41.4
240.0	238.1	14.596	14.560	34.621	25.808	26.869	228.12	0.806	110.0	1508.86	39.4
250.0	248.0	14.306	14.269	34.579	25.839	26.945	225.41	0.829	118.1	1508.04	28.7
260.0	257.9	14.122	14.083	34.562	25.865	27.017	223.11	0.852	126.4	1507.59	33.9
270.0	267.8	13.964	13.924	34.573	25.907	27.104	219.35	0.874	135.0	1507.26	49.3
280.0	277.7	13.475	13.435	34.514	25.964	27.207	214.03	0.896	143.8	1505.75	51.1
290.0	287.6	13.247	13.206	34.512	26.009	27.298	209.89	0.917	152.7	1505.15	43.8
300.0	297.6	12.937	12.895	34.485	26.051	27.387	206.02	0.938	161.9	1504.25	36.7
310.0	307.5	12.692	12.649	34.461	26.082	27.463	203.25	0.958	171.3	1503.56	27.2
320.0	317.4	12.545	12.501	34.453	26.105	27.531	201.26	0.978	180.9	1503.22	32.1
330.0	327.3	12.275	12.230	34.437	26.146	27.618	197.52	0.998	190.7	1502.45	34.7
340.0	337.2	12.059	12.013	34.419	26.174	27.692	195.00	1.018	200.7	1501.85	29.2
350.0	347.1	11.805	11.759	34.394	26.203	27.768	192.32	1.037	210.9	1501.11	26.9
360.0	357.0	11.609	11.562	34.376	26.226	27.837	190.25	1.056	221.3	1500.58	30.3
370.0	366.9	11.413	11.365	34.376	26.262	27.920	186.90	1.075	231.8	1500.06	34.8
380.0	376.8	11.205	11.156	34.368	26.295	27.998	183.94	1.094	242.6	1499.49	29.7
390.0	386.7	10.954	10.905	34.342	26.320	28.070	181.57	1.112	253.5	1498.74	29.0
400.0	396.7	10.738	10.688	34.331	26.350	28.147	178.77	1.130	264.6	1498.12	30.1
410.0	406.6	10.468	10.418	34.305	26.378	28.222	176.17	1.148	275.9	1497.30	37.9
420.0	416.5	10.042	9.992	34.268	26.423	28.315	171.79	1.166	287.4	1495.88	36.4
430.0	426.4	9.758	9.707	34.237	26.447	28.387	169.49	1.183	299.0	1494.98	29.0
440.0	436.3	9.458	9.407	34.212	26.477	28.465	166.56	1.200	310.8	1494.02	27.2
450.0	446.2	9.163	9.112	34.176	26.497	28.533	164.60	1.216	322.8	1493.05	18.7
460.0	456.1	9.068	9.016	34.175	26.511	28.594	163.34	1.233	334.9	1492.86	18.6
470.0	466.0	8.805	8.753	34.147	26.531	28.662	161.39	1.249	347.2	1492.02	23.6
480.0	475.9	8.532	8.530	34.133	26.555	28.733	159.11	1.265	359.6	1491.33	23.4
490.0	485.8	8.566	8.513	34.158	26.577	28.800	157.20	1.281	372.3	1491.46	27.8
500.0	495.7	8.125	8.072	34.111	26.607	28.881	154.07	1.296	385.0	1489.91	26.3
510.0	505.6	7.695	7.643	34.048	26.620	28.945	152.44	1.312	397.9	1488.35	24.9
520.0	515.5	7.658	7.605	34.082	26.653	29.023	149.56	1.327	411.0	1488.42	35.1
530.0	525.4	7.289	7.236	34.061	26.688	29.108	145.91	1.342	424.2	1487.13	31.8
540.0	535.3	7.094	7.041	34.056	26.711	29.179	143.66	1.356	437.6	1486.53	21.7
550.0	545.2	6.483	6.432	33.966	26.722	29.244	142.00	1.370	451.1	1484.19	20.3
560.0	555.1	5.900	5.850	33.891	26.736	29.312	140.00	1.385	464.7	1481.94	24.3
570.0	565.0	5.731	5.681	33.897	26.761	29.386	137.52	1.398	478.5	1481.43	20.7
580.0	574.9	5.770	5.719	33.923	26.777	29.447	136.21	1.412	492.4	1481.78	10.4
590.0	584.8	5.912	5.860	33.955	26.786	29.498	135.79	1.426	506.4	1482.56	19.2
600.0	594.7	5.382	5.331	33.907	26.811	29.577	132.74	1.439	520.6	1480.52	21.2
610.0	604.6	5.393	5.341	33.922	26.822	29.634	131.88	1.452	534.9	1480.75	18.3
620.0	614.5	5.150	5.099	33.916	26.845	29.707	129.45	1.466	549.4	1479.92	15.7
630.0	624.4	5.067	5.015	33.909	26.849	29.758	129.07	1.478	563.9	1479.73	5.7
640.0	634.3	5.104	5.051	33.923	26.856	29.810	128.58	1.491	578.6	1480.06	8.6
650.0	644.2	5.083	5.029	33.934	26.867	29.867	127.61	1.504	593.5	1480.15	16.2
660.0	654.1	4.802	4.749	33.916	26.884	29.935	125.66	1.517	608.4	1479.14	17.1
670.0	664.0	4.331	4.280	33.859	26.889	29.994	124.51	1.529	623.5	1477.28	24.7
680.0	673.9	4.796	4.741	33.980	26.935	30.078	121.03	1.542	638.7	1479.52	29.8
690.0	683.8	4.839	4.783	34.017	26.960	30.147	118.91	1.554	654.0	1479.91	17.5
700.0	693.7	4.877	4.820	34.039	26.973	30.206	117.84	1.566	669.4	1480.26	14.7
710.0	703.6	4.826	4.768	34.053	26.990	30.269	116.29	1.577	685.0	1480.23	12.3
720.0	713.5	4.804	4.746	34.059	26.998	30.322	115.68	1.589	700.7	1480.31	11.3
730.0	723.4	4.744	4.685	34.069	27.012	30.384	114.32	1.600	716.4	1480.24	16.0
740.0	733.3	4.696	4.636	34.083	27.028	30.447	112.80	1.612	732.3	1480.22	13.9
750.0	743.2	4.657	4.597	34.091	27.039	30.504	111.84	1.623	748.3	1480.24	11.0
760.0	753.1	4.631	4.570	34.101	27.050	30.561	110.88	1.634	764.4	1480.30	11.0
770.0	763.0	4.611	4.549	34.112	27.061	30.618	109.93	1.645	780.7	1480.40	7.4
780.0	772.9	4.601	4.539	34.115	27.064	30.668	109.67	1.656	797.0	1480.52	8.6
790.0	782.8	4.567	4.504	34.127	27.078	30.727	108.47	1.667	813.4	1480.56	15.2
800.0	792.6	4.529	4.465	34.143	27.094	30.790	106.93	1.678	830.0	1480.59	17.2
810.0	802.5	4.372	4.308	34.141	27.109	30.854	105.32	1.689	846.6	1480.10	11.9
820.0	812.4	4.347	4.283	34.145	27.115	30.907	104.82	1.699	863.4	1480.16	5.5
830.0	822.3	4.328	4.263	34.148	27.120	30.957	104.46	1.710	880.2	1480.25	9.6
840.0	832.2	4.348	4.282	34.170	27.135	31.018	103.16	1.720	897.2	1480.53	11.8
850.0	842.1	4.300	4.233	34.174	27.143	31.073	102.38	1.730	914.3	1480.50	12.4
860.0	852.0	4.259	4.192	34.188	27.159	31.135	100.96	1.740	931.4	1480.51	17.7
870.0	861.9	4.174	4.107	34.200	27.177	31.201	99.16	1.750	948.7	1480.33	16.2
880.0	871.8	4.126	4.058	34.209	27.189	31.260	98.01	1.760	966.0	1480.31	16.8
890.0	881.6	4.055	3.987	34.225	27.209	31.327	96.08	1.770	983.5	1480.19	13.7
900.0	891.5	4.033	3.964	34.230	27.215	31.380	95.53	1.780	1001.0	1480.27	6.8
910.0	901.4	4.008	3.938	34.235	27.222	31.433	94.96	1.789	1018.7	1480.34	7.6
920.0	911.3	3.973	3.903	34.240	27.230	31.487	94.28	1.799	1036.4	1480.36	12.2
930.0	921.2	3.914	3.843	34.252	27.245	31.549	92.79	1.808	1054.2	1480.29	13.9
940.0	931.1	3.857	3.786	34.258	27.255	31.607	91.77	1.817	1072.2	1480.22	7.8
950.0	941.0	3.838	3.766	34.260	27.259	31.657	91.47	1.826	1090.2	1480.31	9.2
960.0	950.9	3.768	3.696	34.268	27.272	31.717	90.16	1.835	1108.3	1480.19	10.6
970.0	960.7	3.719	3.647	34.269	27.278	31.770	89.60	1.844	1126.4	1480.15	6.7

CTD REPORT RAMA-4 STATION 16 CAST 1 DN
POSITION 34DEG 7 9MIN N 151DEG 11 0MIN E DATE 11 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980 0	970 6	3 689	3 616	34 273	27 284	31 822	89 05	1 853	1144 7	1480 19	8 0
990 0	980 5	3 651	3 578	34 279	27 292	31 878	88 24	1 862	1163 1	1480 20	8 8
1000 0	990 4	3 621	3 547	34 285	27 300	31 932	87 52	1 871	1181 5	1480 24	7 7
1050 0	1039 8	3 476	3 399	34 313	27 336	32 201	84 17	1 914	1275 1	1480 49	6 0
1100 0	1089 2	3 332	3 252	34 338	27 370	32 467	81 04	1 955	1370 6	1480 73	9 3
1150 0	1138 6	3 162	3 080	34 362	27 405	32 735	77 69	1 995	1468 2	1480 85	5 6
1200 0	1188 0	3 070	2 984	34 379	27 427	32 989	75 71	2 033	1567 7	1481 30	4 7
1250 0	1237 3	2 922	2 834	34 406	27 462	33 257	72 37	2 070	1669 0	1481 52	5 4
1300 0	1286 7	2 825	2 734	34 421	27 482	33 509	70 46	2 106	1772 0	1481 95	6 4
1350 0	1336 0	2 744	2 650	34 436	27 501	33 759	68 74	2 141	1876 8	1482 44	4 8
1400 0	1385 4	2 669	2 571	34 450	27 519	34 007	67 14	2 175	1983 3	1482 96	5 9
1450 0	1434 7	2 576	2 475	34 466	27 540	34 259	65 20	2 208	2091 4	1483 41	4 1
1500 0	1484 0	2 517	2 413	34 476	27 553	34 502	64 04	2 240	2201 0	1483 99	3 0

28 JAN 81

CTD REPORT RAMA-4 STATION 17 CAST 1 DN
POSITION 33DEG 47.4MIN N 151DEG 7.0MIN E DATE 11 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.00	0.0	24.838	24.838	34.508	23.048	23.049	483.54	0.000	0.0	1533.42	
10.00	9.9	24.843	24.841	34.508	23.048	23.090	484.06	0.048	0.2	1533.60	1.3
20.00	19.8	24.827	24.822	34.505	23.051	23.136	484.22	0.097	1.0	1533.72	6.3
30.00	29.8	24.817	24.810	34.513	23.061	23.189	483.74	0.145	2.2	1533.86	11.8
40.00	39.7	24.039	24.030	34.502	23.283	23.454	462.93	0.193	3.8	1532.12	410.3
50.00	49.6	21.833	21.823	34.501	23.912	24.127	403.23	0.237	6.0	1526.66	512.2
60.00	59.5	20.717	20.705	34.670	24.345	24.605	362.21	0.276	8.5	1524.04	348.8
70.00	69.5	19.821	19.808	34.737	24.635	24.939	334.94	0.311	11.4	1521.82	240.0
80.00	79.4	19.062	19.047	34.750	24.842	25.190	315.51	0.344	14.7	1519.87	146.0
90.00	89.3	18.668	18.652	34.742	24.937	25.329	306.84	0.375	18.2	1518.90	122.1
100.00	99.2	17.804	17.787	34.665	25.094	25.531	292.12	0.405	22.1	1516.47	143.0
110.00	109.1	17.213	17.194	34.656	25.232	25.713	279.33	0.434	26.3	1514.87	122.8
120.00	119.1	16.697	16.677	34.646	25.347	25.874	268.59	0.462	30.7	1513.47	94.1
130.00	129.0	16.331	16.310	34.635	25.425	25.996	261.45	0.488	35.4	1512.51	91.3
140.00	138.9	15.877	15.854	34.641	25.535	26.151	251.26	0.514	40.4	1511.28	87.9
150.00	148.8	15.551	15.527	34.636	25.606	26.267	244.81	0.539	45.6	1510.43	48.4
160.00	158.7	15.403	15.378	34.629	25.634	26.339	242.41	0.563	51.1	1510.12	36.9
170.00	168.7	15.149	15.123	34.616	25.681	26.431	238.18	0.587	56.8	1509.47	45.7
180.00	178.6	14.872	14.844	34.596	25.727	26.522	234.04	0.611	62.7	1508.73	50.6
190.00	188.5	14.550	14.521	34.578	25.784	26.624	228.88	0.634	68.9	1507.85	40.2
200.00	198.4	14.421	14.391	34.574	25.809	26.694	226.76	0.657	75.3	1507.59	33.6
210.00	208.3	14.199	14.168	34.568	25.852	26.782	222.90	0.679	81.9	1507.03	47.4
220.00	218.2	13.902	13.870	34.555	25.905	26.881	218.05	0.702	88.8	1506.21	55.1
230.00	228.2	13.579	13.546	34.543	25.963	26.985	212.67	0.723	95.8	1505.31	58.9
240.00	238.1	13.137	13.103	34.503	26.023	27.091	207.07	0.744	103.1	1503.96	46.7
250.00	248.0	12.903	12.868	34.485	26.057	27.170	204.07	0.765	110.6	1503.32	39.1
260.00	257.9	12.685	12.649	34.487	26.102	27.261	199.95	0.785	118.3	1502.55	35.6
270.00	267.8	12.402	12.365	34.448	26.128	27.333	197.64	0.805	126.2	1501.91	30.1
280.00	277.7	12.233	12.195	34.451	26.163	27.414	194.47	0.825	134.2	1501.51	37.4
290.00	287.6	11.988	11.949	34.441	26.203	27.499	190.85	0.844	142.5	1500.82	30.2
300.00	297.6	11.785	11.745	34.417	26.223	27.565	189.09	0.863	151.0	1500.26	30.4
310.00	307.5	11.440	11.400	34.384	26.262	27.651	185.41	0.882	159.6	1499.18	39.6
320.00	317.4	11.154	11.113	34.366	26.301	27.737	181.82	0.900	168.4	1498.33	34.8
330.00	327.3	10.806	10.765	34.322	26.330	27.813	179.10	0.918	177.5	1497.21	36.0
340.00	337.2	10.467	10.425	34.297	26.370	27.901	175.25	0.936	186.6	1496.14	28.8
350.00	347.2	10.292	10.250	34.277	26.385	27.962	173.91	0.953	196.0	1495.65	17.8
360.00	357.0	10.116	10.073	34.262	26.404	28.027	172.25	0.971	205.5	1495.16	19.9
370.00	366.9	9.928	9.884	34.240	26.419	28.089	170.90	0.988	215.3	1494.62	23.2
380.00	376.8	9.662	9.618	34.220	26.448	28.165	168.16	1.005	225.1	1493.79	29.9
390.00	386.7	9.365	9.320	34.193	26.476	28.240	165.47	1.022	235.2	1492.84	25.1
400.00	396.7	9.118	9.073	34.166	26.495	28.307	163.66	1.038	245.4	1492.06	30.2
410.00	406.6	8.802	8.757	34.151	26.534	28.393	159.97	1.054	255.7	1491.03	27.9
420.00	416.5	8.518	8.473	34.112	26.547	28.455	158.61	1.070	266.3	1490.08	19.4
430.00	426.4	8.244	8.198	34.085	26.568	28.524	156.58	1.086	276.9	1489.18	25.0
440.00	436.3	8.092	8.046	34.090	26.594	28.597	154.11	1.102	287.8	1488.78	23.4
450.00	446.2	7.860	7.760	34.058	26.611	28.663	152.37	1.117	298.8	1487.81	20.2
460.00	456.1	7.682	7.582	34.041	26.630	28.729	150.53	1.132	309.9	1487.09	23.9
470.00	466.0	7.436	7.336	34.029	26.656	28.803	148.03	1.147	321.2	1486.29	24.2
480.00	475.9	7.434	7.386	34.076	26.679	28.870	146.11	1.162	332.6	1486.89	18.1
490.00	485.8	7.345	7.296	34.078	26.693	28.931	144.85	1.176	344.2	1486.72	15.5
500.00	495.7	7.093	7.044	34.056	26.711	28.997	143.05	1.191	355.9	1485.88	16.1
510.00	505.6	7.025	6.975	34.059	26.723	29.055	142.03	1.205	367.8	1485.76	12.1
520.00	515.6	6.954	6.902	34.063	26.736	29.114	140.89	1.219	379.8	1485.65	15.8
530.00	525.4	6.908	6.856	34.078	26.754	29.179	139.27	1.233	391.9	1485.67	23.3
540.00	535.3	6.772	6.721	34.090	26.781	29.253	136.65	1.247	404.2	1485.32	25.1
550.00	545.2	6.202	6.152	34.014	26.796	29.321	134.69	1.261	416.6	1483.13	20.9
560.00	555.1	6.023	5.973	34.009	26.814	29.388	132.86	1.274	429.2	1482.58	24.6
570.00	565.0	6.046	5.995	34.059	26.851	29.470	129.58	1.287	441.9	1482.90	
580.00	574.9	6.026									
590.00	584.8	5.725	5.673	34.033	26.870	29.585	127.61	1.313	467.6	1481.90	
600.00	594.7	5.555									
610.00	604.6	5.331	5.285	34.002	26.891	29.704	125.25	1.338	493.9	1480.62	
620.00	614.5	5.282	5.230	34.003	26.899	29.758	124.61	1.351	507.2	1480.56	
630.00	624.4	5.141	5.089	33.989	26.904	29.811	124.03	1.363	520.6	1480.13	
640.00	634.3	4.632	4.581	33.930	26.913	29.875	122.43	1.376	534.2	1478.13	18.8
650.00	644.2	4.566	4.514	33.952	26.932	29.940	120.77	1.388	547.8	1478.26	18.8
660.00	654.2	4.432	4.381	33.946	26.947	30.004	119.10	1.400	561.6	1477.65	18.8
670.00	664.1	4.230	4.179	33.921	26.948	30.055	118.76	1.412	575.5	1476.94	8.8
680.00	673.9	4.266	4.214	33.941	26.961	30.103	117.75	1.424	589.6	1477.28	8.8
690.00	683.8	4.439	4.385	33.974	26.969	30.164	117.37	1.435	603.7	1478.20	2.6
700.00	693.7	4.282	4.226	34.039	26.995	30.230	115.50	1.447	618.0	1479.46	2.4
710.00	703.6	4.103	4.047	34.058	27.004	30.284	114.85	1.458	632.4	1479.87	2.4
720.00	713.5	3.921	3.864	34.075	27.021	30.348	113.26	1.470	646.8	1479.91	2.4
730.00	723.4	3.668	3.609	34.084	27.032	30.405	112.31	1.481	661.4	1479.95	2.4
740.00	733.3	3.636	3.577	34.098	27.047	30.466	110.97	1.492	676.2	1479.99	2.4
750.00	743.2	3.599	3.539	34.103	27.055	30.522	110.26	1.503	691.2	1480.01	2.4
760.00	753.1	3.513	3.453	34.120	27.078	30.591	108.06	1.514	706.3	1479.84	2.4
770.00	763.0	3.476	3.416	34.122	27.087	30.647	107.22	1.525	721.6	1479.86	2.4
780.00	772.9	3.396	3.335	34.141	27.107	30.714	105.32	1.536	737.1	1479.96	2.4
790.00	782.8	3.365	3.303	34.148	27.116	30.769	104.53	1.546	752.8	1479.75	2.4
800.00	792.6	3.330	3.268	34.176	27.143	30.841	102.74	1.557	768.7	1479.81	2.4
810.00	802.5	3.284	3.222	34.176	27.150	30.889	102.08	1.567	784.7	1479.92	2.4
820.00	812.4	3.254	3.192	34.183	27.163	30.944	100.34	1.577	800.9	1479.90	2.4
830.00	822.3	3.108	3.045	34.182	27.163	31.003	100.34	1.588	817.3	1479.65	2.4
840.00	832.2	3.042	2.979	34.190	27.180	31.060	99.24	1.597	833.9	1479.69	2.4
850.00	842.1	3.034	2.969	34.202	27.193	31.116	98.36	1.607	850.7	1479.84	2.4
860.00	852.0	3.060	2.994	34.200	27.189	31.180	96.64	1.617	867.8	1479.88	2.4
870.00	861.9	2.946	2.880	34.223	27.223	31.242	95.25	1.626	885.0	1479.40	2.4
880.00	871.8	2.911	2.844	34.223	27.229	31.297	94.50	1.636	902.3	1479.42	2.4
890.00	881.6	2.887	2.820	34.236	27.245	31.356	93.33	1.645	919.8	1479.50	2.4
900.00	891.5	2.858	2.790	34.242	27.252	31.410	92.64	1.655	937.5	1479.55	2.4
910.00	901.4	2.844	2.776	34.244	27.258	31.460	91.41	1.664	955.2	1479.66	2.4
920.00	911.3	2.796	2.728	34.250	27.268	31.513	91.48	1.673	973.1	1479.64	2.4
930.00	921.2	2.791	2.722	34.255	27.273	31.566	91.08	1.682	991.0	1479.80	2.4
940.00	931.1	2.748	2.678	34.258	27.278	31.620	89.40	1.691	1009.1	1479.78	2.4
950.00	941.0	2.684	2.614	34.248	27.278	31.673	88.13	1.700	1027.3	1479.68	2.4
960.00	950.9	2.652	2.581	34.248	27.281	31.726	87.41	1.709	1045.6	1479.62	2.4
970.00	960.9	2.602	2.531	34.234	27.277	31.778	86.19	1.718	1064.0	1479.69	2.4

CTD REPORT RAMA-4 STATION 17 CAST 1 DN
POSITION 33DEG 47.4MIN N 151DEG 7.0MIN E DATE 11 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.586	3.514	34.297	27.313	31.854	86.09	1.726	1059.3	1479.78	4.1
990.0	980.5	3.568	3.495	34.302	27.319	31.906	85.59	1.735	1076.4	1479.88	7.7
1000.0	990.4	3.542	3.469	34.310	27.327	31.961	84.78	1.743	1093.6	1479.94	8.0
1050.0	1039.8	3.359	3.283	34.332	27.362	32.230	81.44	1.785	1180.7	1480.01	5.0
1100.0	1089.2	3.245	3.166	34.358	27.394	32.493	78.58	1.825	1269.9	1480.38	9.0
1150.0	1138.6	3.134	3.052	34.374	27.417	32.748	76.48	1.864	1361.0	1480.75	6.6
1200.0	1188.0	2.991	2.906	34.393	27.445	33.009	73.79	1.901	1454.0	1480.98	2.2
1250.0	1237.3	2.853	2.766	34.415	27.475	33.272	70.94	1.937	1548.7	1481.24	5.2
1300.0	1286.7	2.741	2.651	34.431	27.497	33.527	68.80	1.972	1645.2	1481.60	4.8
1350.0	1336.0	2.649	2.556	34.448	27.519	33.780	66.79	2.006	1743.4	1482.05	3.1
1400.0	1385.4	2.547	2.451	34.465	27.541	34.034	64.66	2.039	1843.2	1482.45	2.1
1450.0	1434.7	2.478	2.379	34.480	27.559	34.282	63.05	2.071	1944.5	1483.00	3.2
1500.0	1484.0	2.418	2.315	34.491	27.573	34.526	61.82	2.102	2047.4	1483.58	3.5
1550.0	1533.3	2.374	2.268	34.501	27.585	34.767	60.82	2.133	2151.8	1484.23	

CTD REPORT RAMA-4 STATION 18 CAST 1 DN
POSITION 33DEG 43.7MIN N 151DEG 59.8MIN E DATE 12 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	24.621	24.621	34.383	23.019	23.019	486.37	0.000	0.0	1532.76	
10.0	9.9	24.584	24.582	34.425	23.062	23.105	482.68	0.048	0.2	1532.88	38.1
20.0	19.8	24.566	24.562	34.464	23.098	23.183	479.76	0.097	1.0	1533.04	171.5
30.0	29.8	23.634	23.627	34.526	23.418	23.547	449.54	0.144	2.2	1530.98	837.0
40.0	39.7	18.579	18.572	34.581	24.835	25.009	314.69	0.183	3.8	1517.64	842.9
50.0	49.6	17.372	17.363	34.626	25.168	25.387	283.28	0.213	5.8	1514.33	274.5
60.0	59.5	16.325	16.315	34.608	25.403	25.667	261.14	0.240	8.0	1511.31	162.6
70.0	69.5	15.926	15.915	34.619	25.504	25.813	251.83	0.266	10.5	1510.26	93.6
80.0	79.4	15.515	15.502	34.617	25.597	25.949	243.34	0.291	13.3	1509.15	83.2
90.0	89.3	15.118	15.104	34.604	25.676	26.073	236.08	0.315	16.3	1508.05	68.6
100.0	99.2	14.829	14.814	34.601	25.738	26.180	230.48	0.338	19.5	1507.29	63.8
110.0	109.1	14.452	14.435	34.584	25.807	26.294	224.15	0.361	23.0	1506.23	70.2
120.0	119.1	14.043	14.025	34.567	25.881	26.414	217.29	0.383	26.7	1505.05	63.5
130.0	129.0	13.781	13.762	34.567	25.937	26.514	212.26	0.405	30.6	1504.36	59.5
140.0	138.9	13.351	13.331	34.537	26.003	26.626	206.16	0.426	34.7	1503.07	53.4
150.0	148.8	13.038	13.017	34.509	26.045	26.714	202.36	0.446	39.0	1502.16	41.4
160.0	158.7	12.778	12.756	34.495	26.087	26.801	198.61	0.466	43.6	1501.44	36.1
170.0	168.7	12.546	12.523	34.476	26.119	26.878	195.83	0.486	48.3	1500.80	26.9
180.0	178.6	12.383	12.359	34.464	26.142	26.946	193.87	0.506	53.2	1500.40	32.7
190.0	188.5	12.078	12.053	34.443	26.185	27.035	189.95	0.525	58.3	1499.50	32.8
200.0	198.4	11.876	11.850	34.422	26.207	27.103	187.99	0.544	63.6	1498.94	24.8
210.0	208.3	11.645	11.618	34.400	26.234	27.175	185.63	0.563	69.1	1498.28	26.3
220.0	218.2	11.462	11.434	34.389	26.260	27.247	183.36	0.581	74.8	1497.80	27.1
230.0	228.2	11.213	11.184	34.366	26.288	27.321	180.82	0.599	80.6	1497.06	37.1
240.0	238.1	10.833	10.805	34.336	26.333	27.413	176.58	0.617	86.6	1495.86	39.2
250.0	248.0	10.436	10.403	34.285	26.365	27.492	173.62	0.635	92.9	1494.53	35.4
260.0	257.9	10.069	10.038	34.252	26.402	27.576	170.10	0.652	99.2	1493.35	32.4
270.0	267.8	9.811	9.779	34.229	26.428	27.649	167.73	0.669	105.8	1492.55	25.2
280.0	277.7	9.454	9.422	34.181	26.450	27.718	165.64	0.686	112.5	1491.36	19.4
290.0	287.6	9.390	9.357	34.187	26.466	27.779	164.37	0.702	119.4	1491.29	20.4
300.0	297.6	9.258	9.224	34.192	26.491	27.850	162.09	0.718	126.4	1490.98	28.6
310.0	307.5	9.054	9.019	34.190	26.522	27.929	159.18	0.735	133.6	1490.38	20.7
320.0	317.4	8.893	8.858	34.168	26.531	27.983	158.46	0.750	141.0	1489.92	15.3
330.0	327.3	8.657	8.621	34.146	26.551	28.050	156.62	0.766	148.5	1489.18	22.8
340.0	337.2	8.436	8.400	34.133	26.575	28.121	154.40	0.782	156.2	1488.50	16.6
350.0	347.1	8.153	8.116	34.086	26.581	28.175	153.78	0.797	164.0	1487.54	17.9
360.0	357.0	7.755	7.718	34.043	26.606	28.249	151.29	0.812	172.0	1486.13	28.2
370.0	366.9	7.408	7.371	34.014	26.632	28.324	148.62	0.827	180.1	1484.93	20.1
380.0	376.8	7.299	7.262	34.008	26.643	28.381	147.69	0.842	188.4	1484.66	17.5
390.0	386.7	7.098	7.060	34.001	26.665	28.451	145.54	0.857	196.8	1484.03	18.6
400.0	396.7	6.988	6.950	33.998	26.678	28.511	144.40	0.871	205.3	1483.77	17.2
410.0	406.6	6.833	6.794	33.997	26.698	28.578	142.50	0.886	214.0	1483.32	25.3
420.0	416.5	6.624	6.585	33.998	26.727	28.654	139.76	0.900	222.9	1482.67	27.1
430.0	426.4	6.439	6.400	33.997	26.750	28.725	137.51	0.914	231.9	1482.10	19.5
440.0	436.3	6.266	6.226	33.985	26.763	28.786	136.26	0.928	241.0	1481.56	18.1
450.0	446.2	6.098	6.058	33.984	26.784	28.854	134.29	0.941	250.3	1481.05	19.4
460.0	456.1	5.957	5.916	33.982	26.800	28.917	132.75	0.955	259.6	1480.65	16.1
470.0	466.0	5.872	5.831	33.987	26.814	28.979	131.43	0.968	269.2	1480.48	18.8
480.0	475.9	5.709	5.668	33.989	26.836	29.048	129.34	0.981	278.8	1479.99	19.4
490.0	485.8	5.583	5.541	33.989	26.851	29.110	127.90	0.994	288.6	1479.65	15.9
500.0	495.7	5.485	5.443	33.993	26.866	29.172	126.50	1.006	298.5	1479.42	14.8
510.0	505.6	5.401	5.358	33.997	26.879	29.232	125.29	1.019	308.5	1479.25	15.3
520.0	515.5	5.286	5.243	34.000	26.895	29.296	123.78	1.032	318.7	1478.95	16.4
530.0	525.4	5.182	5.138	34.004	26.910	29.358	122.33	1.044	329.0	1478.69	13.0
540.0	535.3	5.154	5.109	34.012	26.920	29.414	121.50	1.056	339.4	1478.75	14.9
550.0	545.2	5.151	5.106	34.038	26.941	29.481	119.65	1.068	349.9	1478.93	19.1
560.0	555.1	5.067	5.021	34.048	26.958	29.545	118.01	1.080	360.5	1478.77	17.9
570.0	565.0	4.979	4.933	34.057	26.975	29.609	116.40	1.092	371.3	1478.58	15.6
580.0	574.9	4.870	4.823	34.057	26.987	29.669	115.20	1.103	382.1	1478.30	11.7
590.0	584.8	4.849	4.801	34.066	26.997	29.725	114.38	1.115	393.1	1478.39	18.7
600.0	594.7	4.759	4.711	34.088	27.024	29.800	111.79	1.126	404.2	1478.21	21.7
610.0	604.6	4.679	4.631	34.096	27.039	29.862	110.35	1.137	415.4	1478.05	15.8
620.0	614.5	4.625	4.576	34.108	27.055	29.924	108.95	1.148	426.7	1478.01	14.3
630.0	624.4	4.601	4.551	34.121	27.068	29.983	107.80	1.159	438.1	1478.09	11.9
640.0	634.3	4.575	4.525	34.131	27.079	30.040	106.85	1.170	449.7	1478.15	9.0
650.0	644.2	4.562	4.511	34.138	27.086	30.093	106.26	1.181	461.3	1478.27	10.6
660.0	654.1	4.484	4.432	34.144	27.099	30.154	105.00	1.191	473.0	1478.12	13.5
670.0	664.0	4.415	4.363	34.150	27.111	30.213	103.86	1.202	484.9	1478.00	13.8
680.0	673.9	4.356	4.303	34.160	27.125	30.274	102.53	1.212	496.8	1477.94	11.0
690.0	683.8	4.342	4.289	34.167	27.132	30.327	101.94	1.222	508.9	1478.05	13.0
700.0	693.7	4.269	4.215	34.180	27.150	30.393	100.23	1.232	521.0	1477.92	15.5
710.0	703.6	4.204	4.150	34.186	27.162	30.451	99.12	1.242	533.2	1477.82	7.9
720.0	713.5	4.190	4.135	34.188	27.165	30.501	98.91	1.252	545.6	1477.93	4.4
730.0	723.4	4.171	4.115	34.192	27.170	30.552	98.49	1.262	558.0	1478.02	7.0
740.0	733.3	4.144	4.088	34.199	27.178	30.607	97.74	1.272	570.6	1478.08	9.7
750.0	743.2	4.119	4.062	34.209	27.189	30.664	96.80	1.282	583.2	1478.15	8.8
760.0	753.1	4.088	4.030	34.213	27.195	30.717	96.24	1.291	595.9	1478.19	11.0
770.0	763.0	4.045	3.987	34.226	27.210	30.778	94.88	1.301	608.7	1478.19	11.2
780.0	772.9	4.016	3.957	34.231	27.217	30.831	94.26	1.310	621.7	1478.24	6.9
790.0	782.8	4.002	3.942	34.237	27.223	30.884	93.73	1.320	634.7	1478.35	10.7
800.0	792.6	3.946	3.886	34.248	27.238	30.945	92.38	1.329	647.8	1478.29	11.9
810.0	802.5	3.903	3.842	34.253	27.246	31.000	91.60	1.338	661.0	1478.28	7.4
820.0	812.4	3.876	3.815	34.256	27.251	31.052	91.15	1.347	674.2	1478.34	6.7
830.0	822.3	3.836	3.774	34.260	27.258	31.106	90.49	1.356	687.6	1478.34	10.7
840.0	832.2	3.766	3.704	34.267	27.271	31.166	89.25	1.365	701.1	1478.21	12.0
850.0	842.1	3.717	3.654	34.273	27.280	31.222	88.33	1.374	714.6	1478.18	10.0
860.0	852.0	3.667	3.604	34.278	27.289	31.278	87.50	1.383	728.2	1478.14	8.5
870.0	861.9	3.638	3.574	34.283	27.296	31.331	86.88	1.392	742.0	1478.19	5.4
880.0	871.8	3.623	3.559	34.285	27.299	31.381	86.64	1.401	755.8	1478.29	5.4
890.0	881.6	3.601	3.536	34.291	27.306	31.434	86.03	1.409	769.7	1478.37	5.4
900.0	891.5	3.577	3.511	34.297	27.313	31.488	85.39	1.418	783.6	1478.44	10.8
910.0	901.4	3.508	3.442	34.305	27.326	31.548	84.10	1.426	797.7	1478.32	9.9
920.0	911.3	3.473	3.407	34.307	27.331	31.600	83.65	1.435	811.8	1478.34	4.9
930.0	921.2	3.452	3.385	34.309	27.335	31.650	83.33	1.443	826.1	1478.41	7.2
940.0	931.1	3.417	3.349	34.311	27.344	31.706	82.41	1.451	840.4	1478.44	9.2
950.0	941.0	3.385	3.317	34.323	27.352	31.761	81.69	1.460	854.8	1478.47	7.9
960.0	950.9	3.347	3.278	34.327	27.359	31.814	81.04	1.468	869.2	1478.48	8.1
970.0	960.7	3.301	3.232	34.331	27.366	31.869	80.31	1.476	883.8	1478.45	4.8

28 JAN 81

CTD REPORT RAMA-4 STATION: 18 CAST: 1 DN
POSITION: 33DEG 43.7MIN N 151DEG 59.8MIN E DATE: 12 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.292	3.222	34.331	27.367	31.916	80.29	1.484	898.4	1478.58	4.6
990.0	980.5	3.256	3.186	34.336	27.374	31.970	79.58	1.492	913.1	1478.60	8.6
1000.0	990.4	3.223	3.152	34.343	27.383	32.025	78.77	1.500	927.9	1478.63	7.3
1050.0	1039.8	3.130	3.056	34.359	27.404	32.278	76.89	1.539	1003.0	1479.07	6.3
1100.0	1089.2	3.023	2.946	34.379	27.430	32.536	74.57	1.576	1079.9	1479.46	6.3
1150.0	1138.6	2.902	2.822	34.401	27.459	32.797	71.91	1.613	1158.7	1479.79	7.3
1200.0	1188.0	2.830	2.747	34.416	27.477	33.046	70.31	1.649	1239.2	1480.32	5.5
1250.0	1237.3	2.761	2.674	34.430	27.494	33.295	68.81	1.683	1321.5	1480.86	3.3
1300.0	1286.7	2.684	2.594	34.444	27.512	33.544	67.20	1.717	1405.4	1481.37	3.5
1350.0	1336.0	2.585	2.492	34.460	27.534	33.797	65.20	1.750	1491.0	1481.79	5.3
1400.0	1385.4	2.510	2.414	34.475	27.552	34.046	63.51	1.783	1578.1	1482.31	5.0
1450.0	1434.7	2.443	2.344	34.486	27.567	34.291	62.22	1.814	1666.8	1482.86	4.5
1500.0	1484.0	2.376	2.274	34.500	27.583	34.538	60.69	1.845	1757.1	1483.41	4.0
1550.0	1533.3	2.328	2.222	34.510	27.595	34.780	59.65	1.875	1848.8	1484.04	0.7
1600.0	1582.6	2.280	2.171	34.520	27.608	35.021	58.60	1.905	1941.9	1484.67	3.3
1650.0	1631.9	2.249	2.136	34.527	27.616	35.258	57.97	1.934	2036.5	1485.38	1.5
1700.0	1681.2	2.197	2.081	34.537	27.628	35.499	56.86	1.963	2132.5	1485.99	3.7
1750.0	1730.5	2.157	2.037	34.545	27.638	35.738	56.04	1.991	2229.9	1486.66	2.0
1800.0	1779.7	2.127	2.004	34.551	27.645	35.973	55.47	2.019	2328.6	1487.37	1.5
1850.0	1829.0	2.087	1.960	34.559	27.655	36.211	54.62	2.046	2428.7	1488.03	2.9
1900.0	1878.2	2.049	1.918	34.565	27.663	36.447	53.94	2.073	2530.1	1488.71	2.2
1950.0	1927.4	2.010	1.876	34.573	27.673	36.684	53.11	2.100	2632.8	1489.38	2.0
2000.0	1976.6	1.968	1.830	34.580	27.682	36.921	52.30	2.126	2736.8	1490.04	1.1
2050.0	2025.8	1.940	1.798	34.585	27.688	37.154	51.78	2.152	2842.1	1490.76	0.9
2100.0	2075.0	1.915	1.770	34.591	27.695	37.388	51.25	2.178	2948.6	1491.50	1.5
2150.0	2124.2	1.870	1.721	34.598	27.704	37.625	50.38	2.204	3056.4	1492.14	1.6
2200.0	2173.4	1.851	1.698	34.603	27.710	37.856	49.96	2.229	3165.3	1492.91	1.3
2250.0	2222.6	1.816	1.659	34.608	27.717	38.090	49.34	2.254	3275.5	1493.60	2.3
2300.0	2271.7	1.797	1.636	34.612	27.721	38.320	49.00	2.278	3386.9	1494.36	1.5
2350.0	2320.9	1.768	1.603	34.617	27.728	38.552	48.45	2.303	3499.4	1495.08	1.5
2400.0	2370.0	1.744	1.575	34.621	27.733	38.783	48.04	2.327	3613.1	1495.82	0.8
2450.0	2419.1	1.731	1.558	34.624	27.737	39.011	47.83	2.351	3728.0	1496.61	0.9
2500.0	2468.2	1.726	1.549	34.626	27.739	39.237	47.78	2.375	3844.0	1497.43	1.0
2550.0	2517.3	1.694	1.513	34.631	27.746	39.469	47.16	2.398	3961.2	1498.14	2.2
2600.0	2566.4	1.676	1.490	34.635	27.750	39.698	46.80	2.422	4079.5	1498.91	1.4
2650.0	2615.5	1.669	1.479	34.636	27.752	39.922	46.81	2.445	4198.9	1499.72	0.2
2700.0	2664.6	1.657	1.463	34.638	27.755	40.149	46.66	2.469	4319.5	1500.52	1.1
2750.0	2713.6	1.643	1.444	34.641	27.758	40.376	46.42	2.492	4441.2	1501.31	1.1
2800.0	2762.7	1.635	1.430	34.643	27.761	40.601	46.29	2.515	4564.0	1502.11	0.4
2850.0	2811.7	1.613	1.405	34.646	27.765	40.828	45.97	2.538	4687.6	1502.98	1.0
2900.0	2860.7	1.594	1.382	34.649	27.769	41.055	45.65	2.561	4812.8	1503.64	0.9
2950.0	2909.7	1.580	1.364	34.651	27.772	41.281	45.45	2.584	4938.9	1504.43	0.8
3000.0	2958.8	1.573	1.352	34.653	27.774	41.504	45.37	2.606	5066.1	1505.26	0.9
3050.0	3007.8	1.557	1.331	34.656	27.778	41.731	45.06	2.629	5194.3	1506.04	0.6
3100.0	3056.7	1.547	1.317	34.657	27.780	41.954	45.00	2.652	5323.7	1506.85	0.8
3150.0	3105.7	1.539	1.304	34.660	27.783	42.178	44.82	2.674	5454.1	1507.67	0.3
3200.0	3154.7	1.532	1.292	34.661	27.785	42.400	44.80	2.696	5585.5	1508.49	0.4
3250.0	3203.6	1.526	1.281	34.662	27.786	42.622	44.78	2.719	5718.1	1509.32	0.1
3300.0	3252.6	1.521	1.272	34.663	27.788	42.844	44.78	2.741	5851.7	1510.15	0.9
3350.0	3301.5	1.511	1.257	34.666	27.791	43.067	44.56	2.763	5986.4	1510.97	0.3
3400.0	3350.4	1.507	1.248	34.666	27.792	43.288	44.64	2.786	6122.1	1511.80	0.3
3450.0	3399.4	1.504	1.240	34.667	27.793	43.508	44.67	2.808	6258.9	1512.65	0.6
3500.0	3448.3	1.502	1.233	34.668	27.794	43.728	44.69	2.830	6396.8	1513.50	-0.3
3550.0	3497.2	1.496	1.222	34.669	27.796	43.949	44.67	2.853	6535.7	1514.33	0.1
3600.0	3546.0	1.492	1.212	34.670	27.797	44.169	44.67	2.875	6675.7	1515.17	-0.3
3650.0	3594.9	1.489	1.204	34.671	27.799	44.389	44.69	2.897	6816.7	1516.02	0.7
3700.0	3643.8	1.487	1.197	34.672	27.800	44.608	44.70	2.920	6958.8	1516.87	0.6
3750.0	3692.6	1.482	1.187	34.673	27.802	44.827	44.70	2.942	7102.0	1517.71	1.2
3800.0	3741.5	1.480	1.179	34.674	27.803	45.046	44.73	2.964	7246.2	1518.56	0.0
3850.0	3790.3	1.481	1.175	34.675	27.804	45.264	44.81	2.987	7391.5	1519.42	0.2
3900.0	3839.1	1.477	1.166	34.675	27.805	45.482	44.87	3.009	7537.9	1520.27	0.1
3950.0	3887.9	1.477	1.160	34.676	27.806	45.700	44.93	3.032	7685.3	1521.13	0.7
4000.0	3936.7	1.474	1.152	34.677	27.807	45.918	44.94	3.054	7833.8	1521.98	0.6
4050.0	3985.5	1.475	1.147	34.678	27.808	46.135	45.00	3.077	7983.3	1522.85	-0.3
4100.0	4034.3	1.475	1.142	34.678	27.809	46.351	45.13	3.099	8133.9	1523.71	0.5
4150.0	4083.1	1.476	1.137	34.679	27.810	46.568	45.22	3.122	8285.6	1524.58	0.2
4200.0	4131.8	1.474	1.129	34.680	27.811	46.785	45.24	3.144	8438.4	1525.44	0.3
4250.0	4180.6	1.477	1.127	34.679	27.810	46.999	45.48	3.167	8592.2	1526.31	0.4
4300.0	4229.3	1.476	1.120	34.681	27.812	47.216	45.44	3.190	8747.0	1527.18	0.6
4350.0	4278.0	1.478	1.116	34.680	27.812	47.430	45.67	3.212	8903.0	1528.05	0.2
4400.0	4326.8	1.480	1.112	34.682	27.814	47.646	45.69	3.235	9060.0	1528.93	0.2
4450.0	4375.5	1.482	1.108	34.682	27.814	47.860	45.86	3.258	9218.1	1529.80	0.1
4500.0	4424.2	1.482	1.103	34.683	27.815	48.076	45.90	3.281	9377.3	1530.67	0.1
4550.0	4472.9	1.484	1.099	34.684	27.816	48.290	45.98	3.304	9537.6	1531.55	0.2
4600.0	4521.5	1.487	1.096	34.683	27.816	48.503	46.23	3.327	9699.0	1532.43	0.1
4650.0	4570.2	1.490	1.092	34.684	27.817	48.717	46.35	3.350	9861.4	1533.31	-0.3
4700.0	4618.8	1.492	1.088	34.685	27.818	48.931	46.42	3.373	10025.0	1534.19	-0.3
4750.0	4667.5	1.495	1.085	34.685	27.818	49.143	46.60	3.397	10189.6	1535.07	0.0
4800.0	4716.1	1.497	1.081	34.685	27.818	49.356	46.75	3.420	10355.4	1535.95	0.6
4850.0	4764.8	1.499	1.077	34.686	27.819	49.569	46.85	3.443	10522.2	1536.83	0.1
4900.0	4813.4	1.502	1.074	34.685	27.819	49.781	47.09	3.467	10690.2	1537.71	-0.1
4950.0	4862.0	1.505	1.071	34.686	27.820	49.993	47.18	3.490	10859.2	1538.60	-0.4
5000.0	4910.6	1.508	1.067	34.687	27.821	50.205	47.30	3.514	11029.4	1539.48	0.5
5050.0	4959.2	1.511	1.064	34.687	27.821	50.417	47.47	3.538	11200.6	1540.37	-0.3
5100.0	5007.7	1.515	1.061	34.687	27.821	50.628	47.65	3.561	11373.0	1541.26	-0.2
5150.0	5056.3	1.518	1.058	34.688	27.822	50.839	47.77	3.585	11546.5	1542.15	0.0
5200.0	5104.8	1.523	1.057	34.688	27.822	51.050	47.98	3.609	11721.2	1543.04	0.1
5250.0	5153.4	1.527	1.054	34.689	27.823	51.261	48.10	3.633	11896.9	1543.93	0.4
5300.0	5201.9	1.532	1.052	34.689	27.823	51.470	48.30	3.657	12073.8	1544.83	0.1
5350.0	5250.4	1.537	1.051	34.689	27.823	51.680	48.53	3.682	12251.8	1545.72	0.2
5400.0	5298.9	1.542	1.049	34.689	27.823	51.889	48.73	3.706	12431.0	1546.62	-0.1
5450.0	5347.4	1.547	1.048	34.689	27.823	52.098	48.95	3.730	12611.3	1547.51	0.1
5500.0	5395.9	1.552	1.046	34.689	27.824	52.307	49.17	3.755	12792.8	1548.41	0.0
5550.0	5444.4	1.558	1.045	34.689	27.824	52.516	49.40	3.779	12975.4	1549.31	-0.1
5600.0	5492.9	1.563	1.043	34.690	27.825	52.725	49.54	3.804	13159.1	1550.21	0.6
5650.0	5541.3	1.568	1.041	34.691	27.825	52.934	49.69	3.829	13344.1	1551.11	0.2
5700.0	5589.8	1.573	1.040	34.691	27.826	53.142	49.90	3.854	13530.2	1552.01	0.0
5750.0	5638.2	1.577	1.037	34.692	27.827	53.351	50.04	3.879	13717.4	1552.90	-0.1

CTD REPORT RAMA-4 STATION 18 CAST 1 DN
POSITION 33DEG 43.7MIN N 151DEG 59.8MIN E DATE 12 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
5800.0	5686.7	1.584	1.037	34.691	27.826	53.557	50.34	3.904	13905.9	1553.81	-0. *
5850.0	5735.1	1.589	1.035	34.691	27.826	53.764	50.57	3.929	14095.5	1554.70	0.2
5900.0	5783.5	1.594	1.033	34.692	27.827	53.972	50.72	3.955	14286.3	1555.60	

CTD REPORT RAMA-4 STATION 19 CAST 1 DN
POSITION 33DEG 11.5MIN N 151DEG 59.2MIN E DATE 12 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	24.246	24.246	34.344	23.100	23.100	478.60	0.000	0.0	1531.81	
10.0	9.9	24.244	24.242	34.321	23.084	23.127	480.58	0.048	0.2	1531.94	-6.0
20.0	19.8	24.235	24.231	34.321	23.087	23.173	480.71	0.096	1.0	1532.08	11.7
30.0	29.8	24.198	24.191	34.333	23.108	23.236	479.19	0.144	2.1	1532.16	516.0
40.0	39.7	20.974	20.966	34.516	24.158	24.331	379.25	0.191	3.8	1524.23	835.5
50.0	49.6	18.296	18.287	34.497	24.842	25.060	314.35	0.227	5.9	1516.89	550.2
60.0	59.5	16.604	16.594	34.557	25.299	25.562	271.09	0.257	8.3	1512.10	322.8
70.0	69.5	15.587	15.576	34.526	25.510	25.819	251.23	0.283	11.0	1509.10	166.5
80.0	79.4	15.032	15.020	34.537	25.643	25.997	238.86	0.307	13.9	1507.53	154.1
90.0	89.3	14.185	14.172	34.538	25.828	26.227	221.47	0.330	17.1	1504.99	148.7
100.0	99.2	13.499	13.485	34.508	25.949	26.394	210.15	0.352	20.5	1502.88	152.1
110.0	109.1	12.274	12.259	34.437	26.140	26.632	192.06	0.373	24.0	1498.85	134.7
120.0	119.1	11.686	11.670	34.401	26.225	26.763	184.15	0.391	27.8	1496.95	77.0
130.0	129.0	11.081	11.065	34.349	26.297	26.882	177.43	0.409	31.8	1494.95	53.7
140.0	138.9	10.705	10.688	34.309	26.333	26.964	174.09	0.427	36.0	1493.74	36.0
150.0	148.8	10.446	10.428	34.296	26.369	27.046	170.86	0.444	40.3	1492.96	27.8
160.0	158.7	10.228	10.209	34.273	26.389	27.112	169.12	0.461	44.8	1492.32	22.5
170.0	168.7	9.895	9.875	34.231	26.414	27.183	166.90	0.478	49.4	1491.23	34.5
180.0	178.6	9.562	9.541	34.216	26.458	27.273	162.82	0.495	54.3	1490.16	27.5
190.0	188.5	9.371	9.350	34.189	26.468	27.330	161.96	0.511	59.2	1489.59	15.0
200.0	198.4	9.141	9.119	34.165	26.487	27.395	160.30	0.527	64.4	1488.88	24.8
210.0	208.3	8.819	8.796	34.138	26.517	27.472	157.51	0.543	69.7	1487.82	27.9
220.0	218.2	8.627	8.603	34.131	26.542	27.543	155.27	0.559	75.1	1487.26	16.9
230.0	228.2	8.468	8.444	34.110	26.550	27.597	154.61	0.574	80.8	1486.80	13.5
240.0	238.1	8.290	8.265	34.098	26.568	27.662	153.03	0.590	86.5	1486.28	16.3
250.0	248.0	8.176	8.150	34.094	26.582	27.722	151.81	0.605	92.5	1486.00	16.9
260.0	257.9	7.942	7.915	34.073	26.600	27.787	150.11	0.620	98.5	1485.25	17.2
270.0	267.8	7.732	7.705	34.052	26.615	27.848	148.82	0.635	104.7	1484.59	21.0
280.0	277.7	7.474	7.446	34.038	26.641	27.922	146.37	0.650	111.1	1483.75	21.4
290.0	287.6	7.305	7.277	34.027	26.656	27.984	144.98	0.664	117.6	1483.24	16.9
300.0	297.6	7.148	7.119	34.021	26.673	28.048	143.41	0.679	124.3	1482.79	21.8
310.0	307.5	6.904	6.875	34.010	26.698	28.120	141.05	0.693	131.1	1481.99	18.7
320.0	317.4	6.753	6.723	33.998	26.709	28.178	140.07	0.707	138.0	1481.55	17.7
330.0	327.3	6.555	6.525	33.994	26.732	28.248	137.89	0.721	145.1	1480.93	24.2
340.0	337.2	6.372	6.341	33.994	26.756	28.320	135.64	0.735	152.3	1480.37	17.9
350.0	347.1	6.266	6.235	33.990	26.766	28.377	134.69	0.748	159.7	1480.10	10.8
360.0	357.0	6.153	6.121	33.984	26.776	28.433	133.84	0.762	167.1	1479.81	13.6
370.0	366.9	6.049	6.016	33.988	26.792	28.496	132.35	0.775	174.7	1479.56	12.8
380.0	376.8	6.006	5.973	33.992	26.801	28.551	131.63	0.788	182.5	1479.56	15.5
390.0	386.7	6.023	5.989	34.024	26.824	28.620	129.59	0.801	190.4	1479.83	14.1
400.0	396.7	6.043	6.008	34.035	26.830	28.672	129.15	0.814	198.4	1480.09	14.1
410.0	406.6	5.826	5.790	34.027	26.851	28.741	127.14	0.827	206.5	1479.37	15.8
420.0	416.5	5.372	5.337	33.964	26.855	28.796	126.37	0.840	214.8	1477.62	14.7
430.0	426.4	5.171	5.136	33.958	26.874	28.863	124.54	0.852	223.1	1476.96	17.8
440.0	436.3	5.294	5.258	33.998	26.891	28.925	123.13	0.865	231.6	1477.68	16.0
450.0	446.2	5.106	5.069	33.989	26.906	28.987	121.68	0.877	240.3	1477.06	15.4
460.0	456.1	5.036	4.999	33.997	26.920	29.049	120.37	0.889	249.0	1476.95	13.1
470.0	466.0	4.998	4.960	34.006	26.932	29.106	119.35	0.901	257.9	1476.97	11.2
480.0	475.9	4.981	4.942	34.017	26.942	29.163	118.43	0.913	266.9	1477.07	13.0
490.0	485.8	4.930	4.891	34.029	26.958	29.225	117.05	0.925	276.0	1477.04	9.6
500.0	495.7	4.918	4.878	34.032	26.961	29.275	116.80	0.936	285.2	1477.16	4.2
510.0	505.6	4.908	4.867	34.036	26.966	29.326	116.49	0.948	294.5	1477.29	10.6
520.0	515.5	4.854	4.812	34.049	26.982	29.389	114.99	0.960	303.9	1477.25	10.8
530.0	525.4	4.832	4.790	34.052	26.987	29.440	114.62	0.971	313.5	1477.32	6.5
540.0	535.3	4.787	4.744	34.055	26.995	29.494	113.96	0.983	323.2	1477.30	13.4
550.0	545.2	4.701	4.658	34.066	27.013	29.559	112.25	0.994	333.0	1477.13	13.8
560.0	555.1	4.678	4.634	34.074	27.022	29.614	111.48	1.005	342.9	1477.20	8.0
570.0	565.0	4.652	4.607	34.079	27.028	29.668	110.91	1.016	352.9	1477.27	8.8
580.0	574.9	4.610	4.564	34.086	27.039	29.724	110.01	1.027	363.0	1477.26	10.3
590.0	584.8	4.579	4.533	34.094	27.048	29.780	109.16	1.038	373.2	1477.31	11.5
600.0	594.7	4.528	4.481	34.103	27.061	29.840	107.99	1.049	383.5	1477.27	15.9
610.0	604.6	4.454	4.407	34.116	27.079	29.905	106.28	1.060	394.0	1477.15	16.2
620.0	614.5	4.411	4.363	34.127	27.093	29.965	105.06	1.070	404.5	1477.14	15.1
630.0	624.4	4.368	4.319	34.142	27.109	30.028	103.55	1.081	415.2	1477.15	12.1
640.0	634.3	4.350	4.301	34.149	27.117	30.082	102.91	1.091	425.9	1477.24	10.6
650.0	644.2	4.294	4.244	34.158	27.130	30.142	101.69	1.101	436.8	1477.19	12.7
660.0	654.1	4.252	4.202	34.167	27.141	30.200	100.64	1.112	447.7	1477.19	10.6
670.0	664.0	4.207	4.156	34.172	27.150	30.256	99.85	1.122	458.8	1477.17	8.3
680.0	673.9	4.185	4.133	34.178	27.157	30.309	99.24	1.132	469.9	1477.25	12.3
690.0	683.8	4.154	4.102	34.197	27.175	30.374	97.56	1.141	481.2	1477.30	12.1
700.0	693.7	4.136	4.083	34.202	27.181	30.426	97.08	1.151	492.5	1477.40	11.9
710.0	703.6	4.072	4.018	34.215	27.198	30.490	95.47	1.161	504.0	1477.31	15.9
720.0	713.5	4.003	3.949	34.223	27.211	30.551	94.20	1.170	515.5	1477.20	12.6
730.0	723.4	3.955	3.901	34.230	27.222	30.608	93.22	1.180	527.1	1477.17	6.6
740.0	733.3	3.950	3.895	34.232	27.224	30.656	93.10	1.189	538.8	1477.31	7.6
750.0	743.2	3.892	3.836	34.240	27.236	30.715	91.95	1.198	550.6	1477.24	12.3
760.0	753.1	3.836	3.780	34.247	27.247	30.773	90.89	1.207	562.5	1477.18	9.0
770.0	763.0	3.810	3.753	34.251	27.253	30.826	90.38	1.216	574.5	1477.24	10.4
780.0	772.9	3.751	3.694	34.261	27.267	30.887	89.06	1.225	586.6	1477.16	13.1
790.0	782.8	3.709	3.651	34.270	27.278	30.945	88.00	1.234	598.8	1477.16	12.7
800.0	792.6	3.660	3.602	34.280	27.291	31.004	86.80	1.243	611.0	1477.13	11.1
810.0	802.5	3.624	3.565	34.286	27.299	31.059	86.03	1.252	623.4	1477.15	7.7
820.0	812.4	3.600	3.541	34.291	27.305	31.112	85.47	1.260	635.8	1477.22	7.6
830.0	822.3	3.567	3.507	34.297	27.313	31.167	84.75	1.269	648.3	1477.25	7.9
840.0	832.2	3.538	3.477	34.302	27.320	31.220	84.13	1.277	660.9	1477.30	6.3
850.0	842.1	3.505	3.444	34.305	27.326	31.273	83.61	1.286	673.6	1477.32	7.9
860.0	852.0	3.455	3.393	34.310	27.335	31.328	82.78	1.294	686.3	1477.28	8.4
870.0	861.9	3.438	3.376	34.317	27.342	31.382	82.15	1.302	699.2	1477.38	5.6
880.0	871.8	3.419	3.356	34.319	27.345	31.432	81.86	1.310	712.1	1477.47	4.6
890.0	881.6	3.395	3.331	34.322	27.350	31.483	81.44	1.319	725.1	1477.53	6.8
900.0	891.5	3.356	3.292	34.327	27.358	31.537	80.72	1.327	738.1	1477.54	6.4
910.0	901.4	3.339	3.274	34.330	27.362	31.588	80.38	1.335	751.3	1477.63	5.3
920.0	911.3	3.313	3.248	34.334	27.367	31.640	79.88	1.343	764.5	1477.69	4.3
930.0	921.2	3.305	3.239	34.336	27.370	31.688	79.72	1.351	777.9	1477.82	3.5
940.0	931.1	3.286	3.219	34.339	27.374	31.739	79.36	1.359	791.3	1477.91	2.5
950.0	941.0	3.280	3.213	34.339	27.374	31.785	79.36	1.367	804.7	1478.05	3.0
960.0	950.9	3.263	3.195	34.343	27.379	31.837	78.94	1.375	818.3	1478.14	4.6
970.0	960.7	3.248	3.179	34.346	27.383	31.887	78.62	1.383	831.9	1478.25	4.9

28 JAN 81

CTD REPORT RAMA-4 STATION 19 CAST 1 DN
POSITION: 33DEG 11.5MIN N 151DEG 59.2MIN E DATE 12 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.221	3.152	34.349	27.388	31.938	78.17	1.390	845.6	1478.30	6.4
990.0	980.5	3.192	3.122	34.354	27.395	31.992	77.55	1.398	859.4	1478.35	5.2
1000.0	990.4	3.179	3.108	34.356	27.397	32.041	77.32	1.406	873.2	1478.46	4.4
1050.0	1039.8	3.077	3.003	34.376	27.423	32.298	75.05	1.444	943.7	1478.86	6.8
1100.0	1089.2	2.955	2.878	34.397	27.450	32.558	72.48	1.481	1015.9	1479.19	9.6
1150.0	1138.6	2.873	2.793	34.415	27.472	32.812	70.55	1.517	1090.0	1479.68	6.9
1200.0	1188.0	2.742	2.660	34.435	27.500	33.072	67.94	1.552	1165.7	1479.96	3.7
1250.0	1237.3	2.659	2.574	34.448	27.517	33.321	66.35	1.585	1243.2	1480.44	1.1
1300.0	1286.7	2.585	2.496	34.460	27.533	33.568	64.92	1.618	1322.2	1480.96	4.5
1350.0	1336.0	2.511	2.419	34.471	27.548	33.814	63.56	1.650	1402.9	1481.48	4.1
1400.0	1385.4	2.456	2.361	34.482	27.562	34.058	62.39	1.682	1485.1	1482.08	4.3
1450.0	1434.7	2.384	2.286	34.496	27.579	34.306	60.83	1.713	1568.8	1482.61	2.9
1500.0	1484.0	2.327	2.225	34.508	27.594	34.550	59.56	1.743	1654.0	1483.21	2.9
1550.0	1533.3	2.286	2.181	34.517	27.604	34.790	58.65	1.772	1740.6	1483.87	2.3
1600.0	1582.6	2.237	2.128	34.526	27.616	35.031	57.67	1.801	1828.7	1484.49	2.7
1650.0	1631.9	2.179	2.067	34.537	27.629	35.274	56.45	1.830	1918.2	1485.08	2.5
1700.0	1681.2	2.121	2.006	34.548	27.643	35.517	55.19	1.858	2009.0	1485.67	0.6
1750.0	1730.5	2.086	1.967	34.555	27.651	35.754	54.49	1.885	2101.2	1486.36	1.6
1800.0	1779.7	2.043	1.921	34.562	27.660	35.992	53.69	1.912	2194.7	1487.01	2.9
1850.0	1829.0	2.006	1.880	34.569	27.669	36.229	52.94	1.939	2289.6	1487.69	1.6
1900.0	1878.2	1.969	1.840	34.576	27.678	36.466	52.20	1.965	2385.7	1488.37	1.5
1950.0	1927.4	1.932	1.799	34.585	27.688	36.704	51.32	1.991	2483.0	1489.06	1.2
2000.0	1976.6	1.904	1.767	34.590	27.694	36.937	50.81	2.016	2581.6	1489.77	0.6
2050.0	2025.8	1.876	1.735	34.595	27.701	37.171	50.29	2.042	2681.5	1490.49	2.9
2100.0	2075.0	1.840	1.696	34.600	27.708	37.405	49.69	2.067	2782.5	1491.18	1.8
2150.0	2124.2	1.823	1.675	34.603	27.711	37.635	49.44	2.091	2884.8	1491.94	0.9
2200.0	2173.4	1.798	1.646	34.609	27.718	37.868	48.89	2.116	2988.2	1492.68	1.3
2250.0	2222.6	1.766	1.610	34.615	27.726	38.102	48.23	2.140	3092.8	1493.39	2.4
2300.0	2271.7	1.750	1.590	34.618	27.730	38.331	47.98	2.164	3198.6	1494.16	0.4
2350.0	2320.9	1.730	1.566	34.624	27.734	38.561	47.68	2.188	3305.6	1494.91	1.1
2400.0	2370.0	1.707	1.539	34.626	27.740	38.792	47.21	2.212	3413.6	1495.66	0.6
2450.0	2419.1	1.687	1.515	34.629	27.744	39.021	46.91	2.236	3522.9	1496.42	2.0
2500.0	2468.2	1.664	1.488	34.632	27.748	39.250	46.55	2.259	3633.2	1497.16	1.8
2550.0	2517.3	1.652	1.472	34.635	27.752	39.478	46.34	2.282	3744.7	1497.96	0.5
2600.0	2566.4	1.640	1.455	34.638	27.755	39.705	46.12	2.305	3857.3	1498.75	1.3
2650.0	2615.5	1.630	1.441	34.640	27.758	39.931	46.01	2.328	3971.0	1499.56	0.7
2700.0	2664.6	1.607	1.414	34.644	27.763	40.160	45.56	2.351	4085.8	1500.31	0.0
2750.0	2713.6	1.597	1.399	34.645	27.765	40.385	45.53	2.374	4201.7	1501.11	1.2
2800.0	2762.7	1.587	1.385	34.647	27.767	40.611	45.41	2.397	4318.7	1501.91	0.7
2850.0	2811.7	1.578	1.371	34.650	27.771	40.836	45.22	2.419	4436.8	1502.73	0.4
2900.0	2860.7	1.572	1.361	34.651	27.772	41.060	45.20	2.442	4555.9	1503.55	0.7
2950.0	2909.7	1.568	1.352	34.653	27.774	41.284	45.16	2.464	4676.1	1504.38	0.6
3000.0	2958.8	1.560	1.339	34.654	27.776	41.507	45.12	2.487	4797.5	1505.20	0.7
3050.0	3007.8	1.552	1.327	34.655	27.778	41.730	45.07	2.510	4919.9	1506.02	0.1
3100.0	3056.7	1.549	1.319	34.656	27.779	41.953	45.11	2.532	5043.4	1506.86	0.6
3150.0	3105.7	1.541	1.306	34.657	27.781	42.175	45.06	2.555	5167.9	1507.67	0.8
3200.0	3154.7	1.535	1.295	34.658	27.782	42.397	45.05	2.577	5293.6	1508.50	0.8
3250.0	3203.6	1.533	1.288	34.658	27.783	42.618	45.16	2.600	5420.3	1509.34	0.1
3300.0	3252.6	1.528	1.278	34.661	27.786	42.841	45.01	2.622	5548.0	1510.18	0.9
3350.0	3301.5	1.516	1.262	34.662	27.788	43.064	44.92	2.645	5676.9	1510.98	0.4
3400.0	3350.4	1.510	1.251	34.663	27.789	43.285	44.89	2.667	5806.8	1511.81	0.7
3450.0	3399.4	1.504	1.240	34.665	27.792	43.507	44.80	2.690	5937.9	1512.65	1.1
3500.0	3448.3	1.498	1.229	34.666	27.793	43.727	44.79	2.712	6069.9	1513.48	0.5
3550.0	3497.2	1.493	1.219	34.668	27.795	43.949	44.69	2.734	6203.1	1514.31	0.3
3600.0	3546.0	1.490	1.210	34.668	27.796	44.168	44.78	2.757	6337.3	1515.16	0.4
3650.0	3594.9	1.487	1.202	34.669	27.797	44.387	44.80	2.779	6472.5	1516.00	-0.8
3700.0	3643.8	1.488	1.198	34.669	27.798	44.605	44.94	2.802	6608.9	1516.87	0.6
3750.0	3692.6	1.485	1.190	34.670	27.799	44.825	44.95	2.824	6746.3	1517.71	0.3
3800.0	3741.5	1.483	1.182	34.671	27.800	45.043	44.98	2.847	6884.8	1518.57	1.1
3850.0	3790.3	1.477	1.171	34.672	27.802	45.263	44.95	2.869	7024.3	1519.40	1.6
3900.0	3839.1	1.476	1.165	34.671	27.801	45.479	45.14	2.891	7164.9	1520.26	0.2
3950.0	3887.9	1.474	1.157	34.673	27.803	45.698	45.11	2.914	7306.6	1521.11	0.6
4000.0	3936.7	1.471	1.149	34.675	27.806	45.917	45.04	2.936	7449.3	1521.96	0.1
4050.0	3985.5	1.468	1.140	34.676	27.807	46.135	45.04	2.959	7593.1	1522.82	0.5
4100.0	4034.3	1.468	1.135	34.676	27.807	46.351	45.17	2.982	7738.0	1523.68	0.2
4150.0	4083.1	1.469	1.130	34.677	27.808	46.568	45.24	3.004	7884.0	1524.55	0.1
4200.0	4131.8	1.469	1.125	34.677	27.809	46.783	45.36	3.027	8031.0	1525.41	0.5

CTD REPORT RAMA-4 STATION: 20 CAST: 1 DN
POSITION: 32DEG 30.0MIN N 152DEG 0.6MIN E DATE 13 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	24.587	24.587	34.505	23.121	23.121	476.62	0.000	0.0	1532.81	
10.0	9.9	24.586	24.584	34.505	23.122	23.165	476.97	0.048	0.2	1532.97	0.8
20.0	19.8	24.589	24.584	34.506	23.122	23.208	477.37	0.095	0.9	1533.14	14.6
30.0	29.8	24.448	24.441	34.489	23.152	23.280	475.00	0.143	2.1	1532.94	360.0
40.0	39.7	22.725	22.717	34.777	23.870	24.042	406.85	0.188	3.8	1529.12	501.6
50.0	49.6	21.572	21.562	34.777	24.193	24.409	376.38	0.228	5.8	1526.28	213.1
60.0	59.5	20.967	20.955	34.714	24.311	24.571	365.48	0.265	8.3	1524.76	134.7
70.0	69.5	20.550	20.536	34.777	24.472	24.775	350.53	0.301	11.1	1523.87	136.2
80.0	79.4	20.131	20.116	34.789	24.593	24.940	339.34	0.336	14.3	1522.90	107.2
90.0	89.3	19.735	19.718	34.783	24.694	25.084	330.15	0.369	17.8	1521.96	89.9
100.0	99.2	19.433	19.414	34.791	24.779	25.213	322.39	0.402	21.6	1521.29	83.4
110.0	109.1	19.062	19.042	34.779	24.866	25.344	314.44	0.434	25.7	1520.39	77.3
120.0	119.1	18.729	18.707	34.762	24.938	25.460	307.88	0.465	30.2	1519.58	61.6
130.0	129.0	18.522	18.499	34.764	24.993	25.559	303.04	0.496	35.0	1519.16	56.6
140.0	138.9	18.347	18.322	34.787	25.054	25.665	297.49	0.526	40.0	1518.84	55.0
150.0	148.8	18.107	18.080	34.775	25.106	25.760	292.96	0.555	45.4	1518.29	47.4
160.0	158.7	17.778	17.750	34.728	25.151	25.850	288.89	0.584	51.0	1517.44	45.8
170.0	168.7	17.587	17.558	34.729	25.199	25.942	284.64	0.613	57.0	1517.04	51.9
180.0	178.6	17.317	17.286	34.719	25.258	26.045	279.39	0.641	63.2	1516.40	55.5
190.0	188.5	17.089	17.057	34.719	25.313	26.144	274.43	0.669	69.7	1515.88	57.5
200.0	198.4	16.749	16.716	34.694	25.375	26.251	268.76	0.696	76.5	1514.99	46.8
210.0	208.3	16.638	16.603	34.703	25.408	26.329	265.90	0.723	83.5	1514.83	26.8
220.0	218.2	16.514	16.478	34.692	25.430	26.394	264.20	0.750	90.8	1514.60	31.4
230.0	228.2	16.316	16.278	34.687	25.472	26.482	260.40	0.776	98.4	1514.16	47.5
240.0	238.1	16.050	16.011	34.676	25.526	26.580	255.55	0.802	106.2	1513.49	41.7
250.0	248.0	15.946	15.906	34.685	25.557	26.655	252.89	0.827	114.3	1513.35	42.3
260.0	257.9	15.620	15.579	34.659	25.612	26.756	247.88	0.852	122.6	1512.47	39.4
270.0	267.8	15.458	15.415	34.643	25.636	26.825	245.81	0.877	131.2	1512.11	29.6
280.0	277.7	15.256	15.212	34.629	25.671	26.904	242.73	0.901	140.0	1511.62	27.3
290.0	287.6	15.116	15.071	34.614	25.691	26.969	241.10	0.926	149.0	1511.33	25.8
300.0	297.6	14.953	14.907	34.608	25.723	27.046	238.32	0.950	158.3	1510.97	31.2
310.0	307.5	14.743	14.695	34.588	25.753	27.122	235.59	0.973	167.9	1510.44	36.0
320.0	317.4	14.519	14.470	34.578	25.795	27.208	231.87	0.997	177.6	1509.87	29.7
330.0	327.3	14.397	14.347	34.567	25.813	27.271	230.40	1.020	187.6	1509.63	24.8
340.0	337.2	14.241	14.190	34.564	25.844	27.348	227.64	1.043	197.8	1509.29	26.5
350.0	347.1	14.133	14.081	34.562	25.866	27.414	225.82	1.066	208.3	1509.10	33.3
360.0	357.0	13.826	13.773	34.535	25.910	27.504	221.73	1.088	219.0	1508.23	35.0
370.0	366.9	13.653	13.599	34.520	25.935	27.575	219.56	1.110	229.8	1507.81	27.5
380.0	376.8	13.473	13.418	34.510	25.964	27.650	216.91	1.132	241.0	1507.37	38.2
390.0	386.7	13.167	13.111	34.488	26.010	27.742	212.63	1.153	252.3	1506.50	41.3
400.0	396.7	12.930	12.874	34.472	26.046	27.824	209.38	1.174	263.8	1505.85	31.2
410.0	406.6	12.738	12.681	34.455	26.071	27.895	207.10	1.195	275.5	1505.35	25.5
420.0	416.5	12.610	12.552	34.454	26.096	27.965	204.93	1.216	287.5	1505.08	25.9
430.0	426.4	12.404	12.345	34.435	26.122	28.037	202.58	1.236	299.6	1504.52	41.9
440.0	436.3	12.052	11.993	34.419	26.177	28.141	197.27	1.256	312.0	1503.47	49.7
450.0	446.2	11.718	11.659	34.390	26.218	28.229	193.35	1.276	324.5	1502.44	36.0
460.0	456.1	11.547	11.487	34.386	26.248	28.304	190.70	1.295	337.3	1502.01	24.0
470.0	466.0	11.444	11.383	34.384	26.265	28.368	189.17	1.314	350.2	1501.81	32.1
480.0	475.9	11.090	11.029	34.357	26.309	28.460	184.92	1.333	363.3	1500.71	42.2
490.0	485.8	10.755	10.694	34.326	26.346	28.544	181.39	1.351	376.6	1499.65	39.2
500.0	495.7	10.439	10.377	34.303	26.383	28.630	177.73	1.369	390.1	1498.66	38.0
510.0	505.6	10.155	10.093	34.284	26.418	28.712	174.39	1.387	403.7	1497.78	32.0
520.0	515.5	9.799	9.737	34.238	26.442	28.786	171.91	1.404	417.5	1496.60	24.9
530.0	525.4	9.668	9.606	34.237	26.464	28.854	169.97	1.422	431.5	1496.29	21.5
540.0	535.3	9.600	9.537	34.249	26.484	28.920	168.14	1.439	445.7	1496.22	29.4
550.0	545.2	9.284	9.221	34.228	26.520	29.004	164.65	1.455	460.0	1495.20	34.4
560.0	555.1	9.073	9.010	34.222	26.549	29.081	161.84	1.472	474.5	1494.57	28.5
570.0	565.0	8.779	8.716	34.192	26.572	29.153	159.49	1.488	489.2	1493.61	40.4
580.0	574.9	8.225	8.163	34.146	26.621	29.254	154.36	1.504	504.0	1491.63	35.4
590.0	584.8	7.869	7.808	34.094	26.633	29.316	152.95	1.519	518.9	1490.38	20.4
600.0	594.7	7.596	7.535	34.071	26.654	29.387	150.73	1.534	534.0	1489.47	
610.0	604.6	7.311									
620.0	614.5	7.019	6.958	34.034	26.705	29.537	145.40	1.564	564.7	1487.52	
630.0	624.4	6.861	6.800	34.056	26.744	29.624	141.69	1.578	580.3	1487.09	32.5
640.0	634.3	6.823	6.761	34.082	26.770	29.695	139.37	1.592	596.0	1487.14	24.0
650.0	644.2	6.634	6.572	34.076	26.790	29.764	137.31	1.606	611.8	1486.55	24.3
660.0	654.1	6.222	6.161	34.034	26.810	29.836	134.92	1.620	627.8	1485.03	16.6
670.0	664.0	6.088	6.027	34.019	26.815	29.889	134.37	1.634	643.9	1484.64	18.3
680.0	673.9	5.832	5.772	34.012	26.841	29.965	131.63	1.647	660.1	1483.78	29.0
690.0	683.8	6.224	6.160	34.120	26.878	30.040	128.98	1.660	676.5	1485.64	24.1
700.0	693.7	6.149	6.085	34.132	26.897	30.106	127.23	1.673	692.9	1485.52	19.6
710.0	703.6	6.018	5.954	34.134	26.915	30.172	125.46	1.685	709.6	1485.16	21.5
720.0	713.5	5.559	5.496	34.083	26.931	30.241	123.31	1.698	726.3	1483.42	29.0
730.0	723.4	5.027	4.966	34.038	26.956	30.323	120.07	1.710	743.2	1481.36	23.5
740.0	733.3	4.905	4.844	34.034	26.967	30.381	118.96	1.722	760.1	1481.02	16.5
750.0	743.2	5.010	4.948	34.078	26.990	30.448	117.09	1.734	777.2	1481.67	17.0
760.0	753.1	4.984	4.921	34.091	27.003	30.508	115.91	1.745	794.4	1481.74	16.2
770.0	763.0	4.839	4.776	34.092	27.020	30.573	114.17	1.757	811.8	1481.31	14.8
780.0	772.9	4.702	4.639	34.083	27.028	30.630	113.26	1.768	829.2	1480.90	12.2
790.0	782.8	4.664	4.600	34.095	27.042	30.690	112.02	1.780	846.7	1480.92	14.5
800.0	792.6	4.604	4.540	34.105	27.056	30.751	110.65	1.791	864.4	1480.85	14.6
810.0	802.5	4.528	4.463	34.111	27.069	30.811	109.39	1.802	882.2	1480.71	10.6
820.0	812.4	4.498	4.433	34.115	27.076	30.864	108.83	1.813	900.0	1480.75	10.5
830.0	822.3	4.502	4.436	34.134	27.090	30.924	107.56	1.823	918.0	1480.96	15.1
840.0	832.2	4.655	4.587	34.180	27.111	30.987	106.10	1.834	936.1	1481.81	18.8
850.0	842.1	4.430	4.363	34.171	27.128	31.054	104.14	1.845	954.3	1481.03	17.3
860.0	852.0	4.483	4.414	34.197	27.143	31.114	102.96	1.855	972.6	1481.45	11.8
870.0	861.9	4.406	4.337	34.198	27.152	31.170	102.06	1.865	991.0	1481.29	8.8
880.0	871.8	4.380	4.310	34.203	27.158	31.223	101.46	1.876	1009.5	1481.36	7.4
890.0	881.6	4.406	4.335	34.217	27.167	31.277	100.84	1.886	1028.1	1481.65	9.4
900.0	891.5	4.372	4.301	34.226	27.178	31.334	99.85	1.896	1046.8	1481.68	10.9
910.0	901.4	4.182	4.111	34.209	27.184	31.390	98.93	1.906	1065.6	1481.03	15.1
920.0	911.3	4.028	3.957	34.210	27.200	31.456	97.13	1.916	1084.5	1480.55	15.7
930.0	921.2	4.024	3.953	34.225	27.213	31.514	96.06	1.925	1103.4	1480.72	11.2
940.0	931.1	3.977	3.905	34.231	27.222	31.571	95.15	1.935	1122.5	1480.69	11.3
950.0	941.0	3.928	3.856	34.239	27.233	31.629	94.07	1.944	1141.7	1480.66	8.0
960.0	950.9	3.909	3.836	34.241	27.237	31.679	93.78	1.954	1161.0	1480.75	8.1
970.0	960.7	3.885	3.811	34.253	27.249	31.737	92.70	1.963	1180.3	1480.82	7.7

CTD REPORT RAMA-4 STATION: 20 CAST: 1 DN
POSITION: 32DEG 30.0MIN N 152DEG 0.6MIN E DATE: 13 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY 0/00	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.866	3.792	34.254	27.252	31.786	92.48	1.972	1199.8	1480.91	6.5
990.0	980.5	3.874	3.799	34.268	27.262	31.842	91.62	1.981	1219.3	1481.13	11.4
1000.0	990.4	3.785	3.710	34.271	27.273	31.901	90.44	1.991	1238.9	1480.92	11.8
1050.0	1039.8	3.610	3.532	34.298	27.312	32.173	86.82	2.035	1338.4	1481.03	7.9
1100.0	1089.2	3.462	3.381	34.326	27.348	32.442	83.41	2.077	1440.0	1481.26	5.8
1150.0	1138.6	3.311	3.227	34.343	27.376	32.702	80.78	2.119	1543.6	1481.46	11.0
1200.0	1188.0	3.178	3.091	34.376	27.415	32.973	77.16	2.158	1649.2	1481.76	9.2
1250.0	1237.3	3.017	2.928	34.405	27.453	33.244	73.52	2.196	1756.7	1481.93	5.5
1300.0	1286.7	2.855	2.764	34.419	27.478	33.503	70.97	2.232	1865.9	1482.08	6.4
1350.0	1336.0	2.730	2.636	34.436	27.502	33.760	68.58	2.267	1976.9	1482.38	4.5
1400.0	1385.4	2.666	2.568	34.449	27.519	34.007	67.17	2.301	2089.6	1482.95	-0.2
1450.0	1434.7	2.596	2.495	34.464	27.537	34.255	65.57	2.334	2203.9	1483.49	7.5
1500.0	1484.0	2.519	2.415	34.479	27.555	34.504	63.85	2.366	2319.8	1484.00	3.0
1550.0	1533.3	2.432	2.325	34.490	27.571	34.751	62.30	2.398	2437.2	1484.47	3.2
1600.0	1582.6	2.377	2.267	34.502	27.586	34.995	61.04	2.429	2556.2	1485.07	4.4
1650.0	1631.9	2.308	2.194	34.516	27.602	35.242	59.46	2.459	2676.6	1485.62	4.0
1700.0	1681.2	2.245	2.128	34.529	27.618	35.487	58.00	2.488	2798.5	1486.19	4.4
1750.0	1730.5	2.202	2.082	34.536	27.627	35.725	57.23	2.517	2921.8	1486.84	2.5
1800.0	1779.7	2.120	1.997	34.552	27.647	35.975	55.33	2.545	3046.5	1487.34	4.3
1850.0	1829.0	2.081	1.954	34.560	27.656	36.212	54.48	2.573	3172.5	1488.01	2.8
1900.0	1878.2	2.036	1.906	34.569	27.667	36.452	53.50	2.600	3299.8	1488.66	1.9
1950.0	1927.4	1.994	1.860	34.576	27.676	36.689	52.70	2.626	3428.4	1489.32	2.8
2000.0	1976.6	1.956	1.818	34.583	27.685	36.925	51.93	2.652	3558.3	1489.99	1.5
2050.0	2025.8	1.924	1.783	34.588	27.692	37.159	51.38	2.678	3689.4	1490.69	2.0
2100.0	2075.0	1.884	1.739	34.597	27.702	37.397	50.44	2.703	3821.8	1491.37	3.0
2150.0	2124.2	1.845	1.696	34.602	27.709	37.631	49.78	2.729	3955.4	1492.04	1.7
2200.0	2173.4	1.819	1.667	34.607	27.715	37.863	49.29	2.753	4090.1	1492.77	2.1
2250.0	2222.6	1.800	1.644	34.611	27.720	38.094	48.94	2.778	4226.1	1493.53	1.8
2300.0	2271.7	1.769	1.609	34.616	27.727	38.327	48.36	2.802	4363.2	1494.24	1.4
2350.0	2320.9	1.738	1.574	34.622	27.734	38.560	47.72	2.826	4501.5	1494.95	2.3
2400.0	2370.0	1.710	1.542	34.627	27.740	38.792	47.17	2.850	4640.9	1495.68	1.1
2450.0	2419.1	1.694	1.522	34.631	27.745	39.021	46.85	2.873	4781.5	1496.45	0.8
2500.0	2468.2	1.676	1.500	34.635	27.750	39.251	46.49	2.897	4923.2	1497.22	0.3
2550.0	2517.3	1.656	1.475	34.639	27.755	39.480	46.10	2.920	5065.9	1497.98	1.3
2600.0	2566.4	1.640	1.455	34.641	27.758	39.707	45.91	2.943	5209.8	1498.76	-0.2
2650.0	2615.5	1.628	1.439	34.643	27.760	39.934	45.76	2.966	5354.8	1499.55	0.3
2700.0	2664.6	1.613	1.420	34.646	27.764	40.161	45.50	2.989	5500.9	1500.33	0.0
2750.0	2713.6	1.602	1.404	34.648	27.767	40.387	45.37	3.011	5648.1	1501.14	0.3
2800.0	2762.7	1.589	1.387	34.648	27.768	40.611	45.35	3.034	5796.3	1501.92	0.0
2850.0	2811.7	1.577	1.370	34.653	27.773	40.839	44.98	3.057	5945.7	1502.73	0.9
2900.0	2860.7	1.561	1.350	34.655	27.776	41.065	44.76	3.079	6096.1	1503.51	1.4
2950.0	2909.7	1.550	1.334	34.656	27.778	41.289	44.69	3.101	6247.5	1504.31	1.3
3000.0	2958.8	1.541	1.321	34.658	27.780	41.513	44.57	3.124	6400.1	1505.12	0.7
3050.0	3007.8	1.533	1.308	34.660	27.783	41.737	44.45	3.146	6553.7	1505.94	0.4
3100.0	3056.7	1.522	1.292	34.662	27.786	41.961	44.31	3.168	6708.3	1506.74	1.0
3150.0	3105.7	1.512	1.278	34.664	27.788	42.185	44.16	3.190	6864.0	1507.56	0.1
3200.0	3154.7	1.506	1.267	34.665	27.790	42.407	44.13	3.212	7020.8	1508.38	0.7
3250.0	3203.6	1.500	1.256	34.666	27.791	42.629	44.13	3.235	7178.6	1509.21	-0.1
3300.0	3252.6	1.497	1.248	34.667	27.793	42.851	44.14	3.257	7337.4	1510.05	-0.2
3350.0	3301.5	1.493	1.239	34.667	27.793	43.071	44.23	3.279	7497.3	1510.89	0.9
3400.0	3350.4	1.482	1.223	34.669	27.796	43.294	44.07	3.301	7658.3	1511.70	0.7
3450.0	3399.4	1.476	1.212	34.669	27.797	43.514	44.11	3.323	7820.2	1512.53	0.5
3500.0	3448.3	1.472	1.203	34.671	27.799	43.736	44.04	3.345	7983.3	1513.37	-0.1
3550.0	3497.2	1.469	1.195	34.673	27.801	43.956	43.99	3.367	8147.3	1514.22	-0.3
3600.0	3546.0	1.469	1.190	34.673	27.801	44.175	44.12	3.389	8312.4	1515.07	0.3
3650.0	3594.9	1.468	1.184	34.674	27.803	44.394	44.16	3.411	8478.6	1515.93	0.0
3700.0	3643.8	1.465	1.176	34.676	27.805	44.614	44.11	3.433	8645.7	1516.78	0.6
3750.0	3692.6	1.463	1.168	34.677	27.806	44.834	44.13	3.455	8814.0	1517.63	0.3
3800.0	3741.5	1.462	1.162	34.677	27.806	45.051	44.25	3.477	8983.2	1518.48	0.3
3850.0	3790.3	1.458	1.153	34.678	27.808	45.270	44.24	3.499	9153.6	1519.33	0.5
3900.0	3839.1	1.456	1.145	34.679	27.809	45.489	44.26	3.521	9324.9	1520.18	0.9
3950.0	3887.9	1.457	1.141	34.679	27.809	45.705	44.42	3.544	9497.3	1521.05	0.6
4000.0	3936.7	1.453	1.131	34.680	27.811	45.924	44.41	3.566	9670.8	1521.89	-0.4
4050.0	3985.5	1.455	1.128	34.681	27.812	46.141	44.49	3.588	9845.3	1522.77	-0.3
4100.0	4034.3	1.453	1.120	34.681	27.812	46.357	44.57	3.610	10020.8	1523.62	0.5
4150.0	4083.1	1.453	1.115	34.682	27.813	46.574	44.64	3.633	10197.4	1524.49	0.0
4200.0	4131.8	1.454	1.110	34.681	27.813	46.789	44.86	3.655	10375.0	1525.35	-0.3
4250.0	4180.6	1.456	1.106	34.681	27.813	47.004	45.00	3.677	10553.7	1526.23	0.1
4300.0	4229.3	1.457	1.102	34.683	27.815	47.221	44.99	3.700	10733.5	1527.10	1.0
4350.0	4278.0	1.458	1.097	34.683	27.815	47.436	45.14	3.722	10914.3	1527.97	-0.1
4400.0	4326.8	1.459	1.092	34.684	27.817	47.651	45.20	3.745	11096.2	1528.84	0.1
4450.0	4375.5	1.462	1.089	34.684	27.817	47.866	45.38	3.768	11279.1	1529.72	-0.4
4500.0	4424.2	1.465	1.086	34.684	27.817	48.079	45.56	3.790	11463.1	1530.60	-0.7
4550.0	4472.9	1.467	1.082	34.684	27.817	48.293	45.70	3.813	11648.2	1531.48	-0.5
4600.0	4521.5	1.470	1.079	34.684	27.817	48.507	45.87	3.836	11834.4	1532.36	-0.4
4650.0	4570.2	1.474	1.077	34.685	27.818	48.720	46.00	3.859	12021.6	1533.24	0.9
4700.0	4618.8	1.475	1.072	34.686	27.819	48.935	46.06	3.882	12209.9	1534.12	-0.2
4750.0	4667.5	1.476	1.067	34.687	27.821	49.148	46.13	3.905	12399.3	1534.99	-0.3
4800.0	4716.1	1.479	1.064	34.686	27.820	49.360	46.38	3.928	12589.7	1535.88	0.6
4850.0	4764.8	1.483	1.062	34.686	27.820	49.572	46.56	3.951	12781.3	1536.76	0.1
4900.0	4813.4	1.487	1.059	34.687	27.821	49.785	46.69	3.975	12973.9	1537.65	0.4
4950.0	4862.0	1.493	1.059	34.686	27.820	49.995	46.98	3.998	13167.6	1538.55	0.0
5000.0	4910.6	1.495	1.055	34.687	27.821	50.208	47.06	4.022	13362.5	1539.43	0.0
5050.0	4959.2	1.500	1.053	34.687	27.821	50.419	47.28	4.045	13558.4	1540.32	0.4
5100.0	5007.7	1.504	1.051	34.688	27.822	50.631	47.40	4.069	13755.5	1541.21	0.0
5150.0	5056.3	1.508	1.048	34.687	27.822	50.840	47.66	4.093	13953.6	1542.10	0.0
5200.0	5104.8	1.512	1.046	34.688	27.823	51.052	47.78	4.116	14152.9	1542.99	0.2
5250.0	5153.4	1.515	1.043	34.688	27.823	51.262	47.95	4.140	14353.2	1543.88	-0.5
5300.0	5201.9	1.521	1.042	34.688	27.823	51.472	48.18	4.164	14554.7	1544.78	-0.1
5350.0	5250.4	1.525	1.039	34.690	27.825	51.683	48.24	4.188	14757.4	1545.67	0.1
5400.0	5298.9	1.530	1.038	34.689	27.824	51.892	48.52	4.213	14961.1	1546.57	0.3
5450.0	5347.4	1.535	1.036	34.688	27.823	52.100	48.79	4.237	15166.0	1547.46	-0.1
5500.0	5395.9	1.539	1.033	34.691	27.826	52.311	48.79	4.261	15372.0	1548.36	-0.4
5550.0	5444.4	1.542	1.030	34.692	27.827	52.521	48.90	4.286	15579.2	1549.25	0.1
5600.0	5492.9	1.547	1.028	34.691	27.826	52.729	49.17	4.310	15787.5	1550.14	0.2
5650.0	5541.3	1.551	1.025	34.693	27.828	52.939	49.23	4.335	15997.0	1551.04	-0.4
5700.0	5589.8	1.556	1.023	34.693	27.828	53.147	49.44	4.360	16207.5	1551.94	-0.4
5750.0	5638.2	1.560	1.020	34.693	27.828	53.355	49.65	4.384	16419.3	1552.83	0.7

CTD REPORT RAMA-4 STATION: 20 CAST: 1 DN
POSITION: 32DEG 30.0MIN N 152DEG 0.6MIN E DATE 13 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
5800.0	5686.7	1.559	1.013	34.693	27.829	53.564	49.73	4.409	16632.2	1553.70	0.2
5850.0	5735.1	1.561	1.008	34.693	27.829	53.772	49.89	4.434	16846.2	1554.59	-1.0

CTD REPORT RAMA-4 STATION 21 CAST 1 DN
POSITION 31DEG 57.6MIN N 151DEG 59 9MIN E DATE 14 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CM/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	24.674	24.674	34.420	23.031	23.031	485.21	0.000	0.0	1532.93	
10.0	9.9	24.621	24.619	34.429	23.054	23.097	483.44	0.048	0.2	1532.98	13.6
20.0	19.8	24.609	24.604	34.430	23.059	23.145	483.42	0.097	1.0	1533.11	42.3
30.0	29.8	24.444	24.437	34.474	23.142	23.270	475.97	0.145	2.2	1532.92	226.7
40.0	39.7	23.385	23.376	34.577	23.529	23.701	439.35	0.191	3.8	1530.57	384.7
50.0	49.6	21.995	21.985	34.598	23.940	24.156	400.52	0.234	5.9	1527.20	306.0
60.0	59.5	21.471	21.459	34.702	24.165	24.423	379.51	0.273	8.5	1526.09	259.4
70.0	69.5	20.610	20.596	34.806	24.478	24.781	349.97	0.310	11.4	1524.06	245.2
80.0	79.4	19.935	19.920	34.825	24.673	25.019	331.78	0.345	14.6	1522.40	176.8
90.0	89.3	19.248	19.231	34.814	24.844	25.235	315.80	0.377	18.2	1520.63	127.5
100.0	99.2	18.917	18.899	34.823	24.936	25.371	307.37	0.409	22.1	1519.86	98.6
110.0	109.1	18.384	18.364	34.791	25.047	25.526	297.09	0.439	26.3	1518.46	109.4
120.0	119.1	17.966	17.945	34.804	25.161	25.685	286.52	0.468	30.8	1517.43	97.8
130.0	129.0	17.570	17.547	34.790	25.248	25.817	278.53	0.496	35.6	1516.41	67.7
140.0	138.9	17.345	17.321	34.786	25.300	25.913	273.90	0.524	40.6	1515.90	44.4
150.0	148.8	17.188	17.162	34.787	25.339	25.996	270.52	0.551	46.0	1515.60	32.4
160.0	158.7	17.066	17.039	34.784	25.367	26.057	268.24	0.578	51.6	1515.39	22.1
170.0	168.7	17.013	16.984	34.790	25.384	26.129	266.90	0.605	57.4	1515.41	15.8
180.0	178.6	16.931	16.901	34.783	25.399	26.187	265.84	0.632	63.6	1515.32	12.1
190.0	188.5	16.875	16.843	34.778	25.409	26.241	265.24	0.658	70.0	1515.31	8.9
200.0	198.4	16.830	16.796	34.774	25.417	26.293	264.81	0.685	76.6	1515.33	9.6
210.0	208.3	16.775	16.740	34.771	25.428	26.348	264.08	0.711	83.5	1515.32	10.1
220.0	218.2	16.736	16.699	34.770	25.437	26.401	263.57	0.738	90.7	1515.37	9.3
230.0	228.2	16.705	16.667	34.773	25.447	26.455	262.96	0.764	98.2	1515.44	10.5
240.0	238.1	16.700	16.660	34.786	25.459	26.510	262.21	0.790	105.9	1515.60	6.6
250.0	248.0	16.694	16.652	34.786	25.460	26.555	262.39	0.816	113.8	1515.75	3.9
260.0	257.9	16.670	16.627	34.786	25.466	26.605	262.15	0.843	122.1	1515.84	6.0
270.0	267.8	16.634	16.589	34.782	25.472	26.655	261.93	0.869	130.5	1515.89	4.7
280.0	277.7	16.615	16.568	34.780	25.476	26.702	261.95	0.895	139.3	1516.00	4.9
290.0	287.6	16.574	16.526	34.775	25.482	26.752	261.69	0.921	148.3	1516.03	11.1
300.0	297.6	16.466	16.416	34.762	25.498	26.812	260.48	0.947	157.6	1515.85	12.0
310.0	307.5	16.416	16.365	34.757	25.506	26.864	260.02	0.973	167.1	1515.85	13.2
320.0	317.4	16.282	16.229	34.739	25.524	26.926	258.59	0.999	176.8	1515.59	20.4
330.0	327.3	16.123	16.069	34.720	25.546	26.994	256.71	1.025	186.9	1515.24	20.0
340.0	337.2	16.094	15.939	34.703	25.563	27.055	255.35	1.051	197.2	1514.99	15.3
350.0	347.1	15.918	15.861	34.697	25.576	27.113	254.38	1.076	207.7	1514.91	24.6
360.0	357.0	15.712	15.654	34.682	25.612	27.193	251.20	1.101	218.5	1514.42	30.4
370.0	366.9	15.546	15.487	34.665	25.637	27.263	249.06	1.127	229.5	1514.05	20.5
380.0	376.8	15.433	15.373	34.652	25.653	27.323	247.82	1.151	240.8	1513.84	26.6
390.0	386.7	15.201	15.140	34.632	25.689	27.406	244.50	1.176	252.3	1513.25	39.4
400.0	396.7	14.960	14.898	34.616	25.731	27.493	240.73	1.200	264.1	1512.64	39.1
410.0	406.6	14.746	14.683	34.602	25.767	27.574	237.45	1.224	276.1	1512.10	39.1
420.0	416.5	14.494	14.430	34.584	25.808	27.661	233.69	1.248	288.4	1511.44	42.4
430.0	426.4	14.263	14.198	34.575	25.851	27.750	229.75	1.271	300.9	1510.85	42.7
440.0	436.3	14.031	13.965	34.565	25.893	27.838	225.91	1.294	313.6	1510.25	43.7
450.0	446.2	13.746	13.680	34.545	25.937	27.929	221.77	1.317	326.5	1509.46	41.7
460.0	456.1	13.482	13.415	34.522	25.974	28.012	218.31	1.339	339.6	1508.73	40.1
470.0	466.0	13.196	13.129	34.499	26.015	28.100	214.48	1.360	353.0	1507.92	42.9
480.0	475.9	12.913	12.845	34.480	26.058	28.189	210.48	1.382	366.6	1507.11	33.7
490.0	485.8	12.761	12.692	34.470	26.080	28.258	208.46	1.402	380.4	1506.75	29.1
500.0	495.7	12.559	12.490	34.462	26.114	28.338	205.34	1.423	394.4	1506.23	41.0
510.0	505.6	12.250	12.180	34.443	26.160	28.431	200.97	1.444	408.6	1505.32	41.9
520.0	515.5	12.029	11.959	34.434	26.196	28.514	197.65	1.464	423.0	1504.71	31.9
530.0	525.4	11.705	11.635	34.386	26.220	28.586	195.25	1.483	437.6	1503.71	32.2
540.0	535.3	11.427	11.357	34.365	26.255	28.669	191.84	1.503	452.3	1502.88	44.6
550.0	545.2	11.083	11.013	34.348	26.305	28.767	187.00	1.522	467.3	1501.82	43.9
560.0	555.1	10.744	10.674	34.312	26.338	28.849	183.74	1.540	482.5	1500.74	33.7
570.0	565.0	10.515	10.444	34.298	26.368	28.926	180.91	1.559	497.8	1500.07	28.8
580.0	574.9	10.324	10.253	34.287	26.393	28.998	178.58	1.576	513.3	1499.54	31.1
590.0	584.8	10.111	10.040	34.284	26.427	29.080	175.30	1.594	529.0	1498.93	31.6
600.0	594.7	9.940	9.868	34.280	26.453	29.153	172.84	1.612	544.9	1498.47	26.8
610.0	604.6	9.659	9.587	34.249	26.476	29.224	170.51	1.629	560.9	1497.58	30.8
620.0	614.5	9.335	9.263	34.222	26.508	29.306	167.26	1.646	577.2	1496.52	30.5
630.0	624.4	9.135	9.063	34.211	26.532	29.377	164.96	1.662	593.5	1495.94	29.1
640.0	634.3	8.841	8.769	34.189	26.561	29.456	161.98	1.679	610.1	1494.98	27.0
650.0	644.2	8.661	8.589	34.178	26.581	29.523	160.06	1.695	626.8	1494.46	30.5
660.0	654.1	8.366	8.294	34.167	26.617	29.609	156.38	1.711	643.6	1493.50	32.0
670.0	664.0	8.159	8.087	34.155	26.639	29.679	154.21	1.726	660.6	1492.87	22.0
680.0	673.9	7.888	7.817	34.124	26.655	29.744	152.48	1.742	677.8	1491.96	30.1
690.0	683.8	7.656	7.585	34.130	26.693	29.831	148.69	1.757	695.1	1491.25	39.9
700.0	693.7	7.117	7.048	34.074	26.725	29.917	145.03	1.772	712.5	1489.26	39.8
710.0	703.6	6.623	6.555	34.032	26.758	30.004	141.24	1.786	730.1	1487.43	36.1
720.0	713.5	6.779	6.709	34.104	26.794	30.083	138.27	1.800	747.9	1488.30	25.8
730.0	723.4	6.787	6.716	34.131	26.814	30.148	136.53	1.814	765.8	1488.53	23.0
740.0	733.3	7.136	7.062	34.234	26.848	30.221	134.11	1.827	783.8	1490.18	14.4
750.0	743.2	7.136	7.061	34.237	26.851	30.268	134.05	1.841	801.9	1490.35	3.0
760.0	753.1	7.028	6.953	34.220	26.852	30.317	133.87	1.854	820.2	1490.07	3.5
770.0	763.0	6.875	6.800	34.194	26.853	30.365	133.72	1.867	838.6	1489.61	6.9
780.0	772.9	6.531	6.457	34.141	26.856	30.421	132.87	1.881	857.1	1488.35	16.0
790.0	782.8	5.823	5.752	34.038	26.864	30.489	130.92	1.894	875.8	1485.57	27.3
800.0	792.6	5.724	5.653	34.064	26.897	30.569	127.80	1.907	894.6	1485.37	27.8
810.0	802.5	5.433	5.363	34.042	26.914	30.637	125.74	1.920	913.5	1484.33	19.9
820.0	812.4	5.281	5.211	34.038	26.928	30.701	124.20	1.932	932.6	1483.87	16.4
830.0	822.3	5.186	5.115	34.042	26.943	30.762	122.80	1.945	951.8	1483.65	12.6
840.0	832.2	5.141	5.070	34.047	26.952	30.818	121.97	1.957	971.1	1483.64	8.8
850.0	842.1	5.106	5.034	34.051	26.959	30.872	121.33	1.969	990.5	1483.66	11.3
860.0	852.0	5.034	4.962	34.058	26.973	30.932	120.02	1.981	1010.0	1483.54	18.7
870.0	861.9	4.930	4.858	34.070	26.994	31.001	117.93	1.993	1029.6	1483.29	22.9
880.0	871.8	4.804	4.732	34.079	27.015	31.071	115.80	2.005	1049.4	1482.95	20.9
890.0	881.6	4.747	4.674	34.094	27.033	31.136	114.08	2.016	1069.3	1482.90	19.9
900.0	891.5	4.762	4.688	34.124	27.055	31.203	112.14	2.028	1089.3	1483.16	17.4
910.0	901.4	4.710	4.635	34.133	27.068	31.263	110.94	2.039	1109.4	1483.12	15.7
920.0	911.3	4.667	4.592	34.149	27.086	31.327	109.33	2.050	1129.6	1483.13	17.8
930.0	921.2	4.603	4.527	34.162	27.103	31.391	107.67	2.061	1149.9	1483.05	18.1
940.0	931.1	4.448	4.373	34.160	27.118	31.455	106.01	2.071	1170.3	1482.57	17.8
950.0	941.0	4.339	4.264	34.165	27.133	31.519	104.42	2.082	1190.9	1482.28	20.7
960.0	950.9	4.226	4.151	34.178	27.155	31.589	102.19	2.092	1211.5	1481.99	23.6
970.0	960.7	4.265	4.188	34.215	27.181	31.659	100.00	2.102	1232.2	1482.37	13.8

CTD REPORT RAMA-4 STATION: 21 CAST: 1 DN
POSITION: 31DEG 57.6MIN N 151DEG 59.9MIN E DATE: 14 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	4.203	4.126	34.210	27.183	31.709	99.72	2.112	1253.1	1482.27	6.2
990.0	980.5	4.126	4.049	34.208	27.189	31.763	99.03	2.122	1274.0	1482.10	20.5
1000.0	990.4	4.186	4.107	34.261	27.225	31.843	95.92	2.132	1295.0	1482.59	25.1
1050.0	1039.8	3.845	3.765	34.261	27.260	32.114	92.28	2.179	1401.5	1481.98	13.2
1100.0	1089.2	3.686	3.603	34.279	27.290	32.377	89.48	2.225	1510.3	1482.15	10.8
1150.0	1138.6	3.460	3.375	34.312	27.338	32.660	84.78	2.268	1621.3	1482.06	9.5
1200.0	1188.0	3.324	3.236	34.343	27.375	32.929	81.28	2.310	1734.3	1482.34	6.9
1250.0	1237.3	3.156	3.066	34.366	27.409	33.197	77.97	2.350	1849.3	1482.48	8.4
1300.0	1286.7	3.008	2.915	34.389	27.441	33.461	74.91	2.388	1966.3	1482.70	4.3
1350.0	1336.0	2.908	2.812	34.404	27.462	33.714	72.96	2.425	2085.0	1483.11	6.1
1400.0	1385.4	2.805	2.706	34.423	27.486	33.969	70.68	2.461	2205.5	1483.52	5.3
1450.0	1434.7	2.708	2.606	34.441	27.509	34.223	68.53	2.496	2327.8	1483.95	4.8
1500.0	1484.0	2.626	2.521	34.455	27.527	34.472	66.83	2.529	2451.7	1484.44	3.5
1550.0	1533.3	2.537	2.429	34.470	27.547	34.723	64.97	2.562	2577.2	1484.90	4.2
1600.0	1582.6	2.452	2.341	34.486	27.567	34.973	63.06	2.594	2704.4	1485.38	3.6
1650.0	1631.9	2.377	2.263	34.500	27.584	35.221	61.43	2.626	2833.0	1485.90	2.4
1700.0	1681.2	2.326	2.208	34.510	27.597	35.462	60.33	2.656	2963.1	1486.52	2.8
1750.0	1730.5	2.281	2.160	34.519	27.608	35.702	59.38	2.686	3094.7	1487.17	3.1
1800.0	1779.7	2.212	2.087	34.532	27.624	35.947	57.85	2.715	3227.7	1487.71	1.5
1850.0	1829.0	2.178	2.050	34.539	27.632	36.184	57.15	2.744	3362.1	1488.41	1.9
1900.0	1878.2	2.137	2.005	34.548	27.643	36.422	56.23	2.772	3497.9	1489.07	2.8
1950.0	1927.4	2.089	1.954	34.556	27.653	36.661	55.29	2.800	3635.1	1489.71	2.2
2000.0	1976.6	2.041	1.902	34.563	27.663	36.898	54.41	2.828	3773.6	1490.34	1.4
2050.0	2025.8	1.996	1.854	34.572	27.674	37.137	53.41	2.855	3913.4	1490.99	2.8
2100.0	2075.0	1.951	1.805	34.581	27.684	37.375	52.40	2.881	4054.4	1491.64	1.5
2150.0	2124.2	1.921	1.771	34.587	27.692	37.609	51.81	2.907	4196.8	1492.35	2.8
2200.0	2173.4	1.895	1.741	34.592	27.698	37.842	51.31	2.933	4340.3	1493.08	1.3
2250.0	2222.6	1.863	1.705	34.598	27.705	38.076	50.65	2.958	4485.1	1493.79	2.1
2300.0	2271.7	1.830	1.669	34.604	27.713	38.309	49.98	2.983	4631.2	1494.49	2.8
2350.0	2320.9	1.798	1.633	34.611	27.721	38.543	49.27	3.008	4778.4	1495.20	1.8
2400.0	2370.0	1.771	1.602	34.617	27.728	38.776	48.66	3.033	4926.8	1495.93	1.5
2450.0	2419.1	1.747	1.574	34.621	27.733	39.006	48.23	3.057	5076.3	1496.67	1.7
2500.0	2468.2	1.722	1.545	34.625	27.738	39.237	47.79	3.081	5227.0	1497.41	1.7
2550.0	2517.3	1.699	1.518	34.629	27.744	39.467	47.36	3.105	5378.9	1498.16	0.9
2600.0	2566.4	1.678	1.492	34.633	27.749	39.696	46.98	3.128	5531.8	1498.91	1.0
2650.0	2615.5	1.667	1.477	34.635	27.751	39.922	46.85	3.152	5685.9	1499.71	1.3
2700.0	2664.6	1.654	1.460	34.638	27.755	40.149	46.61	3.175	5841.2	1500.50	1.0
2750.0	2713.6	1.635	1.436	34.640	27.758	40.376	46.38	3.198	5997.5	1501.27	1.0
2800.0	2762.7	1.615	1.412	34.644	27.763	40.604	45.99	3.221	6154.9	1502.03	0.3
2850.0	2811.7	1.605	1.398	34.645	27.765	40.829	45.93	3.244	6313.4	1502.84	0.4
2900.0	2860.7	1.591	1.379	34.649	27.769	41.056	45.60	3.267	6473.1	1503.63	0.0
2950.0	2909.7	1.585	1.369	34.650	27.771	41.279	45.60	3.290	6633.8	1504.46	0.8
3000.0	2958.8	1.570	1.349	34.652	27.774	41.504	45.39	3.313	6795.5	1505.24	1.0
3050.0	3007.8	1.560	1.334	34.655	27.777	41.729	45.18	3.335	6958.4	1506.05	0.1
3100.0	3056.7	1.555	1.325	34.656	27.779	41.952	45.19	3.358	7122.3	1506.88	0.2
3150.0	3105.7	1.547	1.312	34.658	27.781	42.175	45.07	3.381	7287.3	1507.70	0.6
3200.0	3154.7	1.542	1.302	34.658	27.782	42.396	45.14	3.403	7453.4	1508.53	0.4
3250.0	3203.6	1.531	1.286	34.660	27.784	42.620	44.99	3.426	7620.6	1509.34	0.8
3300.0	3252.6	1.521	1.272	34.662	27.787	42.843	44.85	3.448	7788.8	1510.15	0.1
3350.0	3301.5	1.517	1.263	34.662	27.788	43.063	44.93	3.471	7958.1	1510.99	0.4
3400.0	3350.4	1.509	1.250	34.664	27.790	43.286	44.81	3.493	8128.4	1511.81	0.7
3450.0	3399.4	1.499	1.235	34.665	27.792	43.507	44.73	3.515	8299.8	1512.62	0.8
3500.0	3448.3	1.490	1.221	34.667	27.794	43.729	44.60	3.538	8472.2	1513.44	0.4
3550.0	3497.2	1.487	1.213	34.668	27.796	43.950	44.61	3.560	8645.7	1514.29	0.0
3600.0	3546.0	1.485	1.206	34.669	27.797	44.169	44.63	3.582	8820.3	1515.14	0.3
3650.0	3594.9	1.483	1.198	34.670	27.798	44.389	44.67	3.605	8995.9	1515.99	0.0
3700.0	3643.8	1.481	1.191	34.671	27.800	44.608	44.69	3.627	9172.5	1516.84	-0.3
3750.0	3692.6	1.482	1.187	34.671	27.800	44.826	44.85	3.649	9350.2	1517.70	0.6
3800.0	3741.5	1.476	1.176	34.672	27.801	45.045	44.81	3.672	9529.0	1518.54	0.4
3850.0	3790.3	1.473	1.167	34.674	27.804	45.265	44.75	3.694	9708.8	1519.39	0.5
3900.0	3839.1	1.473	1.162	34.674	27.804	45.482	44.88	3.716	9889.7	1520.25	0.5
3950.0	3887.9	1.469	1.152	34.675	27.805	45.700	44.88	3.739	10071.6	1521.09	-0.3
4000.0	3936.7	1.471	1.149	34.675	27.806	45.917	45.04	3.761	10254.6	1521.96	0.4
4050.0	3985.5	1.470	1.142	34.676	27.807	46.134	45.07	3.784	10438.6	1522.82	0.0
4100.0	4034.3	1.472	1.139	34.677	27.808	46.351	45.16	3.806	10623.7	1523.70	-0.3
4150.0	4083.1	1.475	1.136	34.676	27.807	46.566	45.41	3.829	10809.9	1524.57	-0.8
4200.0	4131.8	1.475	1.130	34.678	27.809	46.783	45.39	3.852	10997.1	1525.44	-0.3
4250.0	4180.6	1.476	1.126	34.677	27.809	46.998	45.60	3.874	11185.4	1526.31	-0.1
4300.0	4229.3	1.474	1.118	34.678	27.810	47.214	45.62	3.897	11374.8	1527.17	0.0
4350.0	4278.0	1.477	1.115	34.679	27.811	47.429	45.73	3.920	11565.2	1528.05	0.0
4400.0	4326.8	1.476	1.108	34.679	27.811	47.644	45.85	3.943	11756.8	1528.91	-0.1
4450.0	4375.5	1.478	1.105	34.679	27.812	47.859	46.00	3.966	11949.4	1529.78	0.4
4500.0	4424.2	1.480	1.101	34.681	27.814	48.074	46.01	3.989	12143.0	1530.66	0.2
4550.0	4472.9	1.484	1.099	34.680	27.813	48.287	46.27	4.012	12337.8	1531.54	-0.3
4600.0	4521.5	1.487	1.096	34.681	27.814	48.501	46.37	4.035	12533.6	1532.43	0.0
4650.0	4570.2	1.488	1.091	34.682	27.815	48.716	46.44	4.058	12730.5	1533.30	0.6
4700.0	4618.8	1.489	1.086	34.682	27.815	48.929	46.59	4.082	12928.5	1534.17	0.2
4750.0	4667.5	1.493	1.083	34.682	27.816	49.141	46.78	4.105	13127.6	1535.06	-0.1
4800.0	4716.1	1.496	1.080	34.682	27.816	49.354	46.98	4.128	13327.8	1535.94	0.0
4850.0	4764.8	1.501	1.079	34.681	27.815	49.565	47.23	4.152	13529.1	1536.83	0.6
4900.0	4813.4	1.504	1.076	34.682	27.816	49.778	47.33	4.175	13731.5	1537.72	0.5
4950.0	4862.0	1.508	1.073	34.683	27.817	49.990	47.45	4.199	13935.0	1538.61	0.9
5000.0	4910.6	1.509	1.068	34.682	27.817	50.201	47.66	4.223	14139.6	1539.48	0.0
5050.0	4959.2	1.514	1.067	34.684	27.818	50.414	47.73	4.247	14345.3	1540.38	0.1
5100.0	5007.7	1.517	1.063	34.683	27.818	50.624	47.97	4.271	14552.1	1541.26	0.2
5150.0	5056.3	1.515	1.055	34.684	27.819	50.837	47.99	4.295	14760.1	1542.13	0.0
5200.0	5104.8	1.517	1.051	34.685	27.820	51.048	48.08	4.319	14969.2	1543.01	0.6
5250.0	5153.4	1.520	1.047	34.685	27.820	51.259	48.24	4.343	15179.4	1543.90	-0.1
5300.0	5201.9	1.527	1.048	34.685	27.820	51.468	48.49	4.367	15390.7	1544.80	-0.5
5350.0	5250.4	1.529	1.043	34.685	27.821	51.678	48.66	4.391	15603.1	1545.68	0.3
5400.0	5298.9	1.532	1.040	34.686	27.822	51.889	48.76	4.415	15816.7	1546.57	0.1
5450.0	5347.4	1.533	1.034	34.686	27.822	52.099	48.90	4.440	16031.5	1547.45	0.0

CTD REPORT RAMA-4 STATION: 22 CAST: 1 DN
POSITION: 31DEG 14.7MIN N 151DEG 56.7MIN E DATE: 14 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	24.796	24.796	34.536	23.082	23.082	480.32	0.000	0.0	1533.35	
10.0	9.9	24.783	24.781	34.543	23.092	23.135	479.83	0.048	0.2	1533.49	49.8
20.0	19.8	24.603	24.598	34.595	23.185	23.271	471.37	0.096	1.0	1533.27	458.1
30.0	29.8	22.539	22.533	34.938	24.044	24.173	389.84	0.140	2.1	1528.66	657.9
40.0	39.7	21.227	21.219	35.126	24.552	24.725	341.76	0.176	3.7	1525.59	332.0
50.0	49.6	20.558	20.548	35.124	24.733	24.949	324.94	0.210	5.6	1523.95	118.2
60.0	59.5	20.244	20.232	35.097	24.797	25.056	319.22	0.242	7.9	1523.23	57.6
70.0	69.5	19.983	19.970	35.078	24.852	25.155	314.35	0.274	10.4	1522.65	86.5
80.0	79.4	19.213	19.198	34.975	24.975	25.323	302.93	0.305	13.3	1520.55	113.6
90.0	89.3	18.715	18.699	34.953	25.086	25.478	292.68	0.335	16.5	1519.27	82.3
100.0	99.2	18.356	18.338	34.910	25.144	25.580	287.47	0.364	19.9	1518.35	51.3
110.0	109.1	18.124	18.105	34.895	25.191	25.671	283.34	0.392	23.7	1517.83	42.4
120.0	119.1	17.852	17.831	34.859	25.232	25.755	279.84	0.421	27.7	1517.15	33.9
130.0	129.0	17.639	17.616	34.828	25.261	25.829	277.40	0.449	32.0	1516.66	27.1
140.0	138.9	17.552	17.528	34.834	25.287	25.899	275.24	0.476	36.6	1516.57	29.5
150.0	148.8	17.342	17.316	34.811	25.321	25.977	272.35	0.504	41.5	1516.09	26.0
160.0	158.7	17.242	17.215	34.804	25.340	26.040	270.86	0.531	46.6	1515.94	17.9
170.0	168.7	17.147	17.118	34.796	25.357	26.101	269.54	0.558	52.0	1515.81	18.8
180.0	178.6	17.020	16.990	34.783	25.378	26.166	267.89	0.585	57.7	1515.58	14.9
190.0	188.5	16.964	16.932	34.777	25.387	26.219	267.35	0.611	63.6	1515.57	12.6
200.0	198.4	16.866	16.832	34.767	25.403	26.279	266.13	0.638	69.8	1515.43	16.7
210.0	208.3	16.764	16.729	34.758	25.421	26.341	264.78	0.665	76.3	1515.27	18.9
220.0	218.2	16.695	16.658	34.763	25.441	26.405	263.14	0.691	83.0	1515.24	15.7
230.0	228.2	16.639	16.601	34.760	25.453	26.461	262.40	0.717	90.0	1515.23	13.5
240.0	238.1	16.540	16.500	34.750	25.469	26.521	261.19	0.744	97.2	1515.08	13.2
250.0	248.0	16.477	16.436	34.744	25.479	26.575	260.51	0.770	104.7	1515.04	15.0
260.0	257.9	16.360	16.317	34.733	25.498	26.639	258.96	0.796	112.5	1514.84	22.1
270.0	267.8	16.224	16.180	34.724	25.524	26.708	256.86	0.822	120.5	1514.57	19.3
280.0	277.7	16.130	16.084	34.713	25.537	26.766	255.86	0.847	128.7	1514.44	17.2
290.0	287.6	15.953	15.906	34.686	25.558	26.831	254.18	0.873	137.3	1514.02	18.7
300.0	297.6	15.887	15.838	34.688	25.575	26.892	252.87	0.898	146.0	1513.99	20.8
310.0	307.5	15.684	15.634	34.659	25.599	26.962	250.77	0.923	155.1	1513.49	23.2
320.0	317.4	15.562	15.511	34.651	25.621	27.028	248.97	0.948	164.4	1513.26	22.3
330.0	327.3	15.434	15.382	34.643	25.644	27.095	247.05	0.973	173.9	1513.02	21.8
340.0	337.2	15.319	15.265	34.636	25.664	27.161	245.34	0.998	183.6	1512.81	19.7
350.0	347.1	15.190	15.135	34.622	25.683	27.224	243.84	1.022	193.6	1512.55	21.0
360.0	357.0	15.062	15.006	34.615	25.706	27.292	241.88	1.047	203.9	1512.30	29.6
370.0	366.9	14.802	14.745	34.586	25.741	27.373	238.68	1.071	214.4	1511.61	25.0
380.0	376.8	14.714	14.656	34.579	25.755	27.431	237.60	1.094	225.1	1511.48	27.8
390.0	386.7	14.479	14.420	34.566	25.796	27.518	233.84	1.118	236.1	1510.88	36.3
400.0	396.7	14.300	14.240	34.556	25.827	27.594	231.09	1.141	247.3	1510.45	37.9
410.0	406.6	14.022	13.961	34.536	25.871	27.685	227.02	1.164	258.7	1509.69	36.1
420.0	416.5	13.870	13.808	34.530	25.899	27.757	224.60	1.187	270.3	1509.35	34.1
430.0	426.4	13.585	13.522	34.504	25.938	27.843	220.93	1.209	282.2	1508.55	42.3
440.0	436.3	13.322	13.259	34.490	25.982	27.933	216.89	1.231	294.3	1507.83	32.8
450.0	446.2	13.135	13.071	34.467	26.002	27.999	215.08	1.253	306.6	1507.35	37.0
460.0	456.1	12.835	12.770	34.456	26.054	28.098	210.18	1.274	319.1	1506.49	35.7
470.0	466.0	12.654	12.589	34.432	26.072	28.162	208.63	1.295	331.8	1506.02	29.6
480.0	475.9	12.391	12.325	34.416	26.111	28.248	204.93	1.316	344.8	1505.27	38.6
490.0	485.8	12.144	12.078	34.400	26.146	28.330	201.61	1.336	357.9	1504.58	31.2
500.0	495.7	11.921	11.854	34.376	26.171	28.401	199.37	1.356	371.2	1503.95	22.5
510.0	505.6	11.811	11.743	34.373	26.189	28.466	197.73	1.376	384.8	1503.73	23.7
520.0	515.5	11.614	11.545	34.360	26.216	28.539	195.23	1.396	398.5	1503.19	36.7
530.0	525.4	11.321	11.252	34.346	26.260	28.630	191.06	1.415	412.4	1502.32	29.3
540.0	535.3	11.215	11.145	34.337	26.273	28.689	190.00	1.434	426.5	1502.10	34.4
550.0	545.2	10.844	10.775	34.319	26.326	28.791	184.80	1.453	440.8	1500.94	47.3
560.0	555.1	10.541	10.471	34.297	26.362	28.876	181.22	1.471	455.3	1500.00	36.1
570.0	565.0	10.243	10.173	34.270	26.393	28.955	178.19	1.489	469.9	1499.06	32.0
580.0	574.9	9.983	9.913	34.249	26.421	29.031	175.43	1.507	484.8	1498.27	31.6
590.0	584.8	9.694	9.624	34.225	26.451	29.109	172.48	1.525	499.8	1497.35	36.4
600.0	594.7	9.313	9.244	34.192	26.488	29.196	168.72	1.542	515.0	1496.08	32.0
610.0	604.6	9.094	9.025	34.174	26.509	29.265	166.63	1.558	530.3	1495.41	24.4
620.0	614.5	8.857	8.788	34.155	26.532	29.336	164.37	1.575	545.8	1494.67	28.8
630.0	624.4	8.508	8.439	34.122	26.560	29.415	161.41	1.591	561.5	1493.49	36.2
640.0	634.3	8.135	8.067	34.096	26.596	29.501	157.67	1.607	577.3	1492.21	38.4
650.0	644.2	7.765	7.698	34.068	26.628	29.584	154.26	1.623	593.3	1490.93	32.2
660.0	654.1	7.421	7.354	34.035	26.651	29.658	151.73	1.638	609.5	1489.73	
670.0	664.0	7.072									
680.0	673.9	6.779	6.714	34.000	26.712	29.820	145.36	1.668	642.2	1487.52	
690.0	683.8	6.569	6.504	33.997	26.737	29.894	142.79	1.683	658.8	1486.85	25.7
700.0	693.7	6.344	6.279	33.986	26.757	29.964	140.64	1.697	675.5	1486.11	28.3
710.0	703.6	6.085	6.020	33.982	26.787	30.043	137.56	1.711	692.3	1485.24	30.0
720.0	713.5	5.876	5.812	33.980	26.811	30.117	135.06	1.724	709.3	1484.56	23.3
730.0	723.4	5.726	5.661	33.979	26.829	30.182	133.29	1.738	726.5	1484.12	22.3
740.0	733.3	5.552	5.488	33.981	26.851	30.254	130.99	1.751	743.7	1483.59	22.1
750.0	743.2	5.446	5.381	33.988	26.869	30.319	129.23	1.764	761.1	1483.33	15.4
760.0	753.1	5.401	5.336	33.995	26.880	30.377	128.23	1.777	778.6	1483.32	14.6
770.0	763.0	5.392	5.326	34.017	26.899	30.441	126.62	1.790	796.3	1483.48	16.1
780.0	772.9	5.284	5.217	34.017	26.911	30.501	125.35	1.802	814.0	1483.20	13.5
790.0	782.8	5.218	5.151	34.022	26.923	30.560	124.25	1.815	831.9	1483.10	13.9
800.0	792.6	5.117	5.050	34.025	26.937	30.621	122.87	1.827	849.9	1482.86	20.2
810.0	802.5	4.995	4.928	34.037	26.960	30.693	120.56	1.839	868.1	1482.54	25.3
820.0	812.4	4.867	4.799	34.049	26.984	30.765	118.18	1.851	886.3	1482.19	19.3
830.0	822.3	4.793	4.725	34.054	26.996	30.824	117.02	1.863	904.7	1482.06	14.8
840.0	832.2	4.723	4.655	34.064	27.011	30.887	115.51	1.875	923.2	1481.94	14.4
850.0	842.1	4.680	4.611	34.073	27.023	30.945	114.42	1.886	941.8	1481.94	13.4
860.0	852.0	4.634	4.564	34.084	27.037	31.005	113.14	1.898	960.5	1481.93	17.3
870.0	861.9	4.570	4.500	34.100	27.057	31.072	111.28	1.909	979.3	1481.85	15.6
880.0	871.8	4.526	4.455	34.107	27.067	31.129	110.32	1.920	998.2	1481.84	11.5
890.0	881.6	4.469	4.398	34.113	27.078	31.187	109.28	1.931	1017.3	1481.77	15.1
900.0	891.5	4.407	4.336	34.127	27.095	31.252	107.57	1.942	1036.4	1481.70	13.3
910.0	901.4	4.385	4.313	34.134	27.103	31.306	106.89	1.953	1055.7	1481.78	12.7
920.0	911.3	4.319	4.246	34.146	27.120	31.369	105.32	1.963	1075.0	1481.68	15.0
930.0	921.2	4.267	4.194	34.154	27.132	31.428	104.19	1.974	1094.5	1481.64	12.1
940.0	931.1	4.236	4.162	34.164	27.143	31.485	103.16	1.984	1114.1	1481.69	12.9
950.0	941.0	4.169	4.095	34.172	27.156	31.546	101.86	1.994	1133.7	1481.58	12.8
960.0	950.9	4.122	4.047	34.179	27.166	31.603	100.86	2.005	1153.5	1481.56	9.8
970.0	960.7	4.092	4.017	34.185	27.174	31.657	100.16	2.015	1173.3	1481.61	12.1

CTD REPORT RAMA-4 STATION 22 CAST 1 DN
POSITION: 31DEG 14.7MIN N 151DEG 56.7MIN E DATE 14 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*.E6
980.0	970.6	4.025	3.949	34.195	27.189	31.720	98.72	2.025	1193.3	1481.50	1.2
990.0	980.5	3.994	3.918	34.201	27.197	31.774	97.99	2.034	1213.4	1481.54	1.9
1000.0	990.4	3.968	3.891	34.206	27.204	31.827	97.38	2.044	1233.5	1481.60	1.0
1050.0	1039.8	3.764	3.685	34.248	27.257	32.114	92.29	2.092	1335.7	1481.62	1.5
1100.0	1089.2	3.551	3.469	34.286	27.308	32.399	87.39	2.137	1440.1	1481.59	1.2
1150.0	1138.6	3.381	3.297	34.317	27.349	32.673	83.51	2.179	1546.7	1481.73	1.0
1200.0	1188.0	3.234	3.147	34.345	27.385	32.942	80.10	2.220	1655.4	1481.96	0.8
1250.0	1237.3	3.113	3.023	34.366	27.413	33.202	77.49	2.260	1766.0	1482.29	0.8
1300.0	1286.7	2.983	2.890	34.389	27.443	33.464	74.63	2.298	1878.5	1482.59	0.9
1350.0	1336.0	2.851	2.756	34.414	27.475	33.728	71.59	2.335	1992.8	1482.88	0.9
1400.0	1385.4	2.764	2.665	34.429	27.494	33.979	69.77	2.370	2108.8	1483.35	0.3
1450.0	1434.7	2.663	2.561	34.448	27.518	34.234	67.50	2.404	2226.6	1483.76	0.6
1500.0	1484.0	2.567	2.463	34.463	27.538	34.486	65.57	2.437	2346.0	1484.19	0.3
1550.0	1533.3	2.517	2.409	34.482	27.558	34.734	63.86	2.470	2466.9	1484.83	0.2
1600.0	1582.6	2.450	2.339	34.494	27.573	34.980	62.45	2.501	2589.5	1485.38	0.0
1650.0	1631.9	2.377	2.263	34.509	27.591	35.228	60.77	2.532	2713.5	1485.91	0.6
1700.0	1681.2	2.314	2.196	34.520	27.606	35.471	59.46	2.562	2839.0	1486.48	0.6
1750.0	1730.5	2.268	2.147	34.529	27.617	35.711	58.51	2.592	2966.0	1487.12	1.7
1800.0	1779.7	2.214	2.089	34.539	27.629	35.953	57.36	2.621	3094.3	1487.73	0.6
1850.0	1829.0	2.153	2.025	34.549	27.642	36.195	56.12	2.649	3224.1	1488.31	2.3
1900.0	1878.2	2.112	1.980	34.557	27.652	36.433	55.28	2.677	3355.2	1488.97	2.9
1950.0	1927.4	2.061	1.926	34.567	27.664	36.673	54.16	2.704	3487.6	1489.60	2.6
2000.0	1976.6	2.005	1.867	34.574	27.674	36.912	53.18	2.731	3621.4	1490.20	2.6
2050.0	2025.8	1.963	1.821	34.582	27.684	37.149	52.29	2.757	3756.4	1490.86	2.8
2100.0	2075.0	1.924	1.778	34.589	27.693	37.385	51.50	2.783	3892.7	1491.53	2.2
2150.0	2124.2	1.881	1.732	34.595	27.701	37.621	50.74	2.809	4030.2	1492.19	1.2
2200.0	2173.4	1.847	1.694	34.602	27.709	37.856	49.98	2.834	4168.9	1492.89	2.1
2250.0	2222.6	1.817	1.660	34.607	27.716	38.089	49.42	2.859	4308.9	1493.60	1.9
2300.0	2271.7	1.791	1.630	34.611	27.721	38.320	49.00	2.884	4450.0	1494.33	1.9
2350.0	2320.9	1.768	1.603	34.615	27.726	38.551	48.60	2.908	4592.3	1495.07	1.1
2400.0	2370.0	1.748	1.579	34.619	27.731	38.781	48.23	2.932	4735.8	1495.83	0.9
2450.0	2419.1	1.723	1.550	34.624	27.737	39.012	47.72	2.956	4880.4	1496.57	1.5
2500.0	2468.2	1.703	1.526	34.627	27.741	39.241	47.42	2.980	5026.1	1497.33	0.7
2550.0	2517.3	1.693	1.512	34.629	27.744	39.467	47.29	3.004	5173.0	1498.13	1.9
2600.0	2566.4	1.674	1.489	34.632	27.748	39.696	46.99	3.027	5321.0	1498.89	1.2
2650.0	2615.5	1.656	1.466	34.636	27.753	39.924	46.63	3.051	5470.1	1499.67	1.4
2700.0	2664.6	1.639	1.445	34.638	27.756	40.151	46.42	3.074	5620.4	1500.44	0.4
2750.0	2713.6	1.626	1.428	34.642	27.760	40.379	46.12	3.097	5771.7	1501.23	1.5
2800.0	2762.7	1.609	1.406	34.645	27.764	40.606	45.84	3.120	5924.2	1502.01	1.4
2850.0	2811.7	1.596	1.389	34.647	27.767	40.831	45.67	3.143	6077.7	1502.80	0.9
2900.0	2860.7	1.580	1.368	34.648	27.769	41.057	45.51	3.166	6232.4	1503.58	0.3
2950.0	2909.7	1.572	1.356	34.650	27.772	41.281	45.42	3.188	6388.1	1504.40	1.2
3000.0	2958.8	1.562	1.341	34.653	27.775	41.506	45.22	3.211	6544.9	1505.21	1.2
3050.0	3007.8	1.553	1.328	34.654	27.777	41.730	45.16	3.233	6702.7	1506.02	1.0
3100.0	3056.7	1.539	1.309	34.657	27.780	41.955	44.89	3.256	6861.7	1506.81	0.3
3150.0	3105.7	1.532	1.297	34.659	27.783	42.178	44.80	3.278	7021.7	1507.64	0.5
3200.0	3154.7	1.528	1.288	34.659	27.783	42.399	44.88	3.301	7182.7	1508.47	-0.5
3250.0	3203.6	1.522	1.278	34.660	27.785	42.621	44.86	3.323	7344.9	1509.30	0.4
3300.0	3252.6	1.515	1.266	34.662	27.787	42.844	44.76	3.346	7508.1	1510.12	0.2
3350.0	3301.5	1.510	1.256	34.663	27.789	43.065	44.75	3.368	7672.3	1510.96	-0.2
3400.0	3350.4	1.503	1.244	34.662	27.789	43.285	44.87	3.390	7837.6	1511.78	-0.7
3450.0	3399.4	1.500	1.236	34.665	27.792	43.507	44.74	3.413	8004.0	1512.63	0.2
3500.0	3448.3	1.496	1.227	34.666	27.793	43.728	44.74	3.435	8171.4	1513.47	0.7
3550.0	3497.2	1.490	1.216	34.668	27.796	43.949	44.64	3.457	8339.9	1514.30	0.8
3600.0	3546.0	1.489	1.209	34.668	27.796	44.168	44.76	3.480	8509.4	1515.15	0.6
3650.0	3594.9	1.485	1.200	34.668	27.797	44.387	44.85	3.502	8680.0	1515.99	0.7
3700.0	3643.8	1.479	1.189	34.670	27.799	44.608	44.74	3.524	8851.7	1516.83	-0.2
3750.0	3692.6	1.475	1.180	34.672	27.801	44.828	44.67	3.547	9024.4	1517.67	-0.3
3800.0	3741.5	1.474	1.174	34.671	27.801	45.045	44.85	3.569	9198.1	1518.53	-0.3
3850.0	3790.3	1.473	1.167	34.673	27.803	45.264	44.82	3.592	9372.9	1519.39	-0.2
3900.0	3839.1	1.471	1.160	34.672	27.802	45.481	44.99	3.614	9548.8	1520.24	-0.3
3950.0	3887.9	1.468	1.151	34.674	27.805	45.700	44.94	3.636	9725.7	1521.09	-0.2
4000.0	3936.7	1.467	1.145	34.675	27.806	45.917	44.98	3.659	9903.7	1521.95	0.2
4050.0	3985.5	1.468	1.140	34.675	27.806	46.134	45.12	3.681	10082.8	1522.81	0.1
4100.0	4034.3	1.468	1.135	34.676	27.807	46.351	45.17	3.704	10262.9	1523.68	0.2
4150.0	4083.1	1.467	1.128	34.676	27.808	46.567	45.29	3.727	10444.1	1524.54	0.4
4200.0	4131.8	1.465	1.121	34.677	27.809	46.784	45.30	3.749	10626.3	1525.39	1.1
4250.0	4180.6	1.465	1.115	34.678	27.810	47.000	45.36	3.772	10809.6	1526.26	-0.2
4300.0	4229.3	1.469	1.113	34.678	27.810	47.215	45.54	3.795	10994.0	1527.14	-0.6
4350.0	4278.0	1.468	1.106	34.679	27.812	47.431	45.59	3.817	11179.4	1528.01	-0.3
4400.0	4326.8	1.472	1.105	34.678	27.811	47.644	45.85	3.840	11365.9	1528.89	-0.2
4450.0	4375.5	1.473	1.100	34.679	27.812	47.860	45.92	3.863	11553.5	1529.76	-0.3
4500.0	4424.2	1.475	1.096	34.679	27.812	48.074	46.07	3.886	11742.2	1530.64	0.8
4550.0	4472.9	1.477	1.092	34.680	27.813	48.288	46.15	3.909	11931.9	1531.51	0.5
4600.0	4521.5	1.479	1.088	34.680	27.814	48.502	46.31	3.932	12122.7	1532.39	0.5
4650.0	4570.2	1.481	1.084	34.682	27.816	48.717	46.32	3.955	12314.6	1533.27	-0.3
4700.0	4618.8	1.484	1.081	34.680	27.814	48.928	46.63	3.979	12507.6	1534.15	0.1
4750.0	4667.5	1.487	1.078	34.681	27.815	49.142	46.74	4.002	12701.7	1535.03	0.0
4800.0	4716.1	1.488	1.072	34.683	27.817	49.356	46.74	4.025	12896.9	1535.91	-0.3
4850.0	4764.8	1.492	1.070	34.681	27.816	49.567	47.08	4.049	13093.2	1536.80	0.9
4900.0	4813.4	1.491	1.063	34.682	27.817	49.780	47.11	4.072	13290.5	1537.66	0.3
4950.0	4862.0	1.494	1.060	34.683	27.818	49.993	47.21	4.096	13489.0	1538.55	0.4
5000.0	4910.6	1.499	1.059	34.683	27.818	50.204	47.41	4.119	13688.6	1539.44	-0.5
5050.0	4959.2	1.502	1.055	34.683	27.818	50.415	47.59	4.143	13889.3	1540.33	0.3
5100.0	5007.7	1.504	1.051	34.684	27.819	50.628	47.66	4.167	14091.1	1541.21	0.0
5150.0	5056.3	1.505	1.046	34.684	27.820	50.839	47.81	4.191	14294.0	1542.08	0.1
5200.0	5104.8	1.509	1.043	34.685	27.821	51.050	47.93	4.215	14498.0	1542.98	0.1
5250.0	5153.4	1.513	1.041	34.685	27.821	51.260	48.12	4.239	14703.2	1543.87	0.6
5300.0	5201.9	1.517	1.038	34.686	27.822	51.471	48.24	4.263	14909.4	1544.76	0.1
5350.0	5250.4	1.521	1.036	34.686	27.822	51.681	48.45	4.287	15116.8	1545.65	0.7
5400.0	5298.9	1.523	1.031	34.686	27.822	51.891	48.59	4.311	15325.4	1546.53	0.4
5450.0	5347.4	1.526	1.027	34.687	27.823	52.101	48.71	4.335	15535.0	1547.42	0.2
5500.0	5395.9	1.532	1.027	34.689	27.825	52.311	48.79	4.360	15745.8	1548.33	0.0
5550.0	5444.4	1.536	1.024	34.688	27.824	52.520	49.05	4.384	15957.8	1549.22	0.1
5600.0	5492.9	1.538	1.019	34.689	27.825	52.729	49.15	4.409	16170.8	1550.10	-0.4
5650.0	5541.3	1.544	1.018	34.688	27.825	52.937	49.44	4.433	16385.1	1551.00	1.0
5700.0	5589.8	1.548	1.016	34.690	27.826	53.146	49.50	4.458	16600.4	1551.90	0.0
5750.0	5638.2	1.552	1.013	34.691	27.827	53.355	49.64	4.483	16816.9	1552.79	-0.2

CTD REPORT RAMA-4 STATION 22 CAST 1 DN
POSITION 3 DEG 14.7MIN N 151DEG 56.7MIN E DATE 14 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
5800.0	5686.7	1.556	1.010	34.691	27.827	53.563	49.82	4.508	17034.6	1553.69	0.5
5850.0	5735.1	1.563	1.010	34.690	27.827	53.769	50.15	4.533	17253.4	1554.59	0.1
5900.0	5783.5	1.566	1.006	34.690	27.827	53.977	50.32	4.558	17473.4	1555.48	0.3

CTD REPORT RAMA-4 STATION 23 CAST 1 DN
POSITION: 30DEG 41.8MIN N 151DEG 58.4MIN E DATE 15 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	26.624	26.624	34.817	22.738	22.738	513.17	0.000	0.0	1537.95	
10.0	9.9	26.568	26.566	34.825	22.762	22.805	511.34	0.051	0.3	1537.99	265.6
20.0	19.8	24.946	24.941	34.869	23.290	23.375	461.40	0.101	1.0	1534.40	651.7
30.0	29.8	22.437	22.431	34.996	24.116	24.245	382.90	0.145	2.2	1528.46	564.6
40.0	39.7	21.410	21.402	35.074	24.462	24.635	350.31	0.181	3.9	1526.02	274.7
50.0	49.6	20.434	20.424	35.019	24.686	24.902	329.36	0.216	5.8	1523.50	178.5
60.0	59.5	19.716	19.705	34.960	24.832	25.092	315.82	0.248	8.1	1521.61	120.6
70.0	69.5	19.273	19.260	34.944	24.935	25.240	306.31	0.279	10.7	1520.52	99.8
80.0	79.4	18.779	18.764	34.912	25.038	25.386	296.88	0.310	13.7	1519.24	86.5
90.0	89.3	18.502	18.486	34.919	25.114	25.506	290.00	0.339	16.9	1518.62	80.5
100.0	99.2	17.973	17.955	34.863	25.204	25.640	281.75	0.368	20.4	1517.19	56.5
110.0	109.1	17.841	17.822	34.854	25.230	25.710	279.59	0.396	24.2	1516.95	36.1
120.0	119.1	17.583	17.562	34.833	25.278	25.802	275.40	0.423	28.2	1516.33	32.9
130.0	129.0	17.481	17.459	34.826	25.298	25.866	273.85	0.451	32.6	1516.19	22.1
140.0	138.9	17.331	17.307	34.811	25.323	25.935	271.76	0.478	37.2	1515.89	20.4
150.0	148.8	17.266	17.240	34.811	25.339	25.995	270.58	0.505	42.1	1515.86	20.9
160.0	158.7	17.101	17.074	34.793	25.365	26.066	268.40	0.532	47.2	1515.51	21.8
170.0	168.7	16.999	16.970	34.784	25.383	26.128	267.01	0.559	52.6	1515.36	18.8
180.0	178.6	16.865	16.835	34.768	25.403	26.192	265.42	0.586	58.3	1515.10	21.6
190.0	188.5	16.747	16.715	34.762	25.427	26.260	263.48	0.612	64.2	1514.90	17.7
200.0	198.4	16.678	16.645	34.756	25.439	26.316	262.64	0.639	70.4	1514.85	11.5
210.0	208.3	16.629	16.594	34.755	25.450	26.371	261.93	0.665	76.9	1514.86	11.7
220.0	218.2	16.536	16.499	34.742	25.463	26.427	261.06	0.691	83.6	1514.73	12.1
230.0	228.2	16.471	16.433	34.737	25.474	26.483	260.26	0.717	90.6	1514.69	15.7
240.0	238.1	16.387	16.347	34.737	25.494	26.547	258.67	0.743	97.8	1514.60	16.9
250.0	248.0	16.327	16.286	34.737	25.509	26.605	257.64	0.769	105.3	1514.58	15.6
260.0	257.9	16.208	16.165	34.723	25.526	26.667	256.28	0.795	113.1	1514.36	20.5
270.0	267.8	16.056	16.012	34.708	25.550	26.736	254.27	0.820	121.1	1514.04	21.4
280.0	277.7	15.925	15.880	34.693	25.569	26.799	252.75	0.845	129.3	1513.78	21.4
290.0	287.6	15.753	15.706	34.672	25.593	26.867	250.76	0.871	137.8	1513.39	20.9
300.0	297.6	15.647	15.599	34.664	25.611	26.930	249.31	0.896	146.6	1513.21	20.6
310.0	307.5	15.546	15.497	34.664	25.634	26.997	247.38	0.921	155.6	1513.06	25.2
320.0	317.4	15.372	15.321	34.648	25.661	27.069	245.03	0.945	164.9	1512.66	26.8
330.0	327.3	15.184	15.132	34.627	25.687	27.141	242.77	0.970	174.3	1512.21	26.0
340.0	337.2	15.011	14.958	34.610	25.713	27.211	240.58	0.994	184.1	1511.81	26.1
350.0	347.1	14.851	14.797	34.598	25.739	27.282	238.29	1.018	194.0	1511.45	22.2
360.0	357.0	14.729	14.674	34.586	25.757	27.345	236.86	1.042	204.2	1511.21	27.0
370.0	366.9	14.502	14.446	34.568	25.792	27.426	233.63	1.065	214.7	1510.63	31.6
380.0	376.8	14.363	14.306	34.564	25.819	27.498	231.28	1.088	225.4	1510.34	25.6
390.0	386.7	14.248	14.189	34.563	25.843	27.567	229.22	1.112	236.3	1510.13	30.7
400.0	396.7	14.063	14.003	34.560	25.881	27.650	225.85	1.134	247.4	1509.69	28.1
410.0	406.6	13.932	13.871	34.548	25.899	27.713	224.30	1.157	258.7	1509.41	24.3
420.0	416.5	13.785	13.723	34.546	25.929	27.788	221.69	1.179	270.3	1509.10	31.1
430.0	426.4	13.538	13.476	34.520	25.960	27.866	218.81	1.201	282.1	1508.42	30.3
440.0	436.3	13.339	13.276	34.502	25.987	27.939	216.35	1.223	294.1	1507.90	37.2
450.0	446.2	13.047	12.983	34.484	26.033	28.031	212.09	1.245	306.3	1507.07	38.7
460.0	456.1	12.787	12.723	34.455	26.063	28.108	209.31	1.266	318.8	1506.33	34.0
470.0	466.0	12.537	12.472	34.437	26.098	28.190	205.99	1.286	331.4	1505.63	31.5
480.0	475.9	12.318	12.252	34.414	26.124	28.261	203.67	1.307	344.2	1505.02	32.7
490.0	485.8	12.070	12.004	34.401	26.161	28.346	200.12	1.327	357.3	1504.32	40.0
500.0	495.7	11.804	11.737	34.387	26.201	28.433	196.36	1.347	370.5	1503.56	42.0
510.0	505.6	11.509	11.442	34.369	26.243	28.522	192.39	1.367	384.0	1502.68	47.1
520.0	515.5	11.142	11.075	34.345	26.292	28.620	187.64	1.386	397.6	1501.53	47.0
530.0	525.4	10.835	10.768	34.326	26.332	28.708	183.69	1.404	411.4	1500.59	37.5
540.0	535.3	10.542	10.475	34.298	26.362	28.786	180.76	1.423	425.4	1499.68	29.2
550.0	545.2	10.298	10.231	34.274	26.386	28.858	178.43	1.441	439.6	1498.94	25.1
560.0	555.1	10.114	10.046	34.262	26.409	28.927	176.32	1.458	453.9	1498.43	34.6
570.0	565.0	9.770	9.702	34.242	26.451	29.019	172.11	1.476	468.5	1497.32	38.0
580.0	574.9	9.443	9.376	34.208	26.479	29.096	169.31	1.493	483.2	1496.25	38.9
590.0	584.8	9.058	8.991	34.184	26.522	29.189	164.95	1.510	498.0	1494.96	33.2
600.0	594.7	8.855	8.788	34.165	26.540	29.254	163.23	1.526	513.0	1494.35	26.1
610.0	604.6	8.699	8.632	34.174	26.571	29.333	160.25	1.542	528.2	1493.94	33.8
620.0	614.5	8.166	8.100	34.107	26.600	29.414	157.01	1.558	543.6	1492.02	30.9
630.0	624.4	7.925	7.859	34.092	26.624	29.487	154.59	1.574	559.1	1491.25	24.4
640.0	634.3	7.774	7.708	34.090	26.644	29.555	152.61	1.589	574.7	1490.83	20.1
650.0	644.2	7.533	7.467	34.065	26.659	29.619	151.01	1.605	590.5	1490.04	22.4
660.0	654.1	7.423	7.356	34.078	26.685	29.691	148.59	1.620	606.5	1489.79	23.7
670.0	664.0	7.385	7.317	34.098	26.706	29.758	146.71	1.634	622.6	1489.84	25.5
680.0	673.9	6.945	6.879	34.051	26.730	29.835	143.96	1.649	638.9	1488.23	33.6
690.0	683.8	6.692	6.626	34.052	26.764	29.919	140.45	1.663	655.2	1487.40	30.7
700.0	693.7	6.212	6.148	33.994	26.780	29.989	138.26	1.677	671.8	1485.60	22.0
710.0	703.6	6.185	6.120	34.015	26.800	30.055	136.47	1.691	688.4	1485.68	21.1
720.0	713.5	5.941	5.876	34.000	26.819	30.123	134.44	1.704	705.2	1484.85	23.2
730.0	723.4	5.649	5.585	33.980	26.839	30.194	132.22	1.718	722.2	1483.81	28.2
740.0	733.3	5.381	5.318	33.976	26.867	30.273	129.18	1.731	739.2	1482.89	24.2
750.0	743.2	5.292	5.228	33.982	26.882	30.335	127.72	1.744	756.4	1482.70	18.0
760.0	753.1	5.177	5.113	33.988	26.900	30.401	125.92	1.756	773.7	1482.40	21.4
770.0	763.0	5.068	5.004	34.000	26.922	30.471	123.80	1.769	791.2	1482.13	22.8
780.0	772.9	4.975	4.910	34.014	26.944	30.540	121.71	1.781	808.7	1481.94	20.1
790.0	782.8	4.905	4.840	34.025	26.960	30.603	120.13	1.793	826.4	1481.83	17.5
800.0	792.6	4.819	4.754	34.034	26.977	30.668	118.51	1.805	844.2	1481.65	18.6
810.0	802.5	4.750	4.684	34.048	26.996	30.733	116.73	1.817	862.1	1481.54	16.1
820.0	812.4	4.710	4.643	34.058	27.008	30.792	115.61	1.829	880.1	1481.56	11.3
830.0	822.3	4.675	4.608	34.065	27.017	30.848	114.75	1.840	898.3	1481.58	13.9
840.0	832.2	4.605	4.537	34.077	27.034	30.912	113.12	1.852	916.5	1481.47	15.1
850.0	842.1	4.550	4.482	34.084	27.046	30.971	112.02	1.863	934.9	1481.42	13.0
860.0	852.0	4.508	4.439	34.095	27.059	31.030	110.81	1.874	953.4	1481.42	10.7
870.0	861.9	4.465	4.396	34.098	27.066	31.084	110.16	1.885	972.0	1481.41	12.2
880.0	871.8	4.429	4.359	34.114	27.083	31.147	108.64	1.896	990.7	1481.45	19.9
890.0	881.6	4.347	4.277	34.131	27.105	31.217	106.49	1.907	1009.5	1481.29	17.2
900.0	891.5	4.320	4.249	34.141	27.116	31.274	105.50	1.917	1028.4	1481.35	13.6
910.0	901.4	4.264	4.193	34.153	27.131	31.336	104.05	1.928	1047.4	1481.30	14.5
920.0	911.3	4.227	4.155	34.164	27.144	31.395	102.89	1.938	1066.5	1481.32	12.8
930.0	921.2	4.182	4.110	34.173	27.155	31.454	101.77	1.948	1085.7	1481.31	12.3
940.0	931.1	4.151	4.078	34.184	27.167	31.512	100.67	1.959	1105.0	1481.36	14.1
950.0	941.0	4.108	4.034	34.198	27.183	31.574	99.22	1.969	1124.4	1481.36	11.0
960.0	950.9	4.086	4.012	34.202	27.188	31.626	98.74	1.979	1143.9	1481.44	8.1
970.0	960.7	4.039	3.964	34.208	27.198	31.682	97.84	1.988	1163.5	1481.41	11.9

CTD REPORT RAMA-4 STATION 23 CAST 1 DN
POSITION 30DEG 41.8MIN N 151DEG 58.4MIN E DATE 15 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CM/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	3.998	3.923	34.219	27.211	31.742	96.62	1.998	1183.2	1481.42	13.2
990.0	980.5	3.951	3.875	34.228	27.223	31.801	95.49	2.008	1203.0	1481.40	13.6
1000.0	990.4	3.895	3.819	34.238	27.236	31.861	94.16	2.017	1222.9	1481.34	12.7
1050.0	1039.8	3.725	3.646	34.264	27.274	32.132	90.66	2.063	1323.7	1481.48	10.6
1100.0	1089.2	3.517	3.436	34.298	27.321	32.413	86.12	2.108	1426.8	1481.46	6.6
1150.0	1138.6	3.362	3.278	34.327	27.359	32.684	82.54	2.150	1531.9	1481.66	7.6
1200.0	1188.0	3.227	3.140	34.348	27.388	32.945	79.80	2.190	1639.1	1481.93	8.1
1250.0	1237.3	3.106	3.016	34.370	27.417	33.206	77.12	2.230	1748.2	1482.27	5.8
1300.0	1286.7	2.989	2.896	34.392	27.445	33.466	74.46	2.268	1859.2	1482.62	7.8
1350.0	1336.0	2.880	2.784	34.409	27.468	33.721	72.26	2.304	1972.0	1483.00	5.1
1400.0	1385.4	2.750	2.652	34.432	27.498	33.983	69.39	2.340	2086.6	1483.29	5.6
1450.0	1434.7	2.655	2.554	34.450	27.521	34.237	67.26	2.374	2202.8	1483.73	4.5
1500.0	1484.0	2.569	2.464	34.463	27.538	34.486	65.59	2.407	2320.7	1484.20	4.4
1550.0	1533.3	2.499	2.391	34.483	27.560	34.738	63.57	2.439	2440.2	1484.75	5.1
1600.0	1582.6	2.465	2.354	34.494	27.572	34.978	62.63	2.471	2561.2	1485.44	3.6
1650.0	1631.9	2.387	2.272	34.507	27.589	35.225	61.04	2.502	2683.8	1485.95	4.1
1700.0	1681.2	2.306	2.188	34.521	27.607	35.473	59.29	2.532	2807.8	1486.45	3.1
1750.0	1730.5	2.245	2.124	34.531	27.620	35.716	58.08	2.561	2933.2	1487.02	2.3
1800.0	1779.7	2.189	2.065	34.543	27.634	35.959	56.78	2.590	3060.1	1487.63	3.1
1850.0	1829.0	2.129	2.001	34.553	27.647	36.201	55.55	2.618	3188.3	1488.21	2.9
1900.0	1878.2	2.091	1.960	34.560	27.656	36.438	54.81	2.646	3317.9	1488.89	2.7
1950.0	1927.4	2.045	1.910	34.567	27.665	36.675	53.97	2.673	3448.8	1489.53	2.6
2000.0	1976.6	2.008	1.870	34.574	27.674	36.911	53.22	2.700	3581.0	1490.21	1.6
2050.0	2025.8	1.973	1.831	34.581	27.682	37.147	52.48	2.726	3714.5	1490.90	1.8
2100.0	2075.0	1.934	1.788	34.588	27.691	37.383	51.69	2.752	3849.2	1491.58	2.2
2150.0	2124.2	1.895	1.746	34.595	27.700	37.619	50.90	2.778	3985.2	1492.25	1.0
2200.0	2173.4	1.862	1.709	34.600	27.707	37.852	50.32	2.803	4122.4	1492.95	2.5
2250.0	2222.6	1.838	1.681	34.604	27.712	38.084	49.91	2.828	4260.8	1493.69	1.6
2300.0	2271.7	1.802	1.641	34.612	27.721	38.319	49.07	2.853	4400.4	1494.38	2.1
2350.0	2320.9	1.778	1.613	34.615	27.726	38.549	48.73	2.877	4541.2	1495.12	0.1
2400.0	2370.0	1.752	1.583	34.620	27.732	38.781	48.21	2.902	4683.2	1495.85	1.2
2450.0	2419.1	1.725	1.552	34.624	27.737	39.012	47.74	2.926	4826.3	1496.58	1.5
2500.0	2468.2	1.709	1.532	34.628	27.742	39.241	47.42	2.949	4970.6	1497.36	1.5
2550.0	2517.3	1.689	1.508	34.630	27.745	39.469	47.17	2.973	5116.0	1498.11	0.7
2600.0	2566.4	1.668	1.483	34.635	27.751	39.699	46.69	2.997	5262.5	1498.87	1.1
2650.0	2615.5	1.650	1.460	34.638	27.755	39.927	46.41	3.020	5410.1	1499.64	0.9
2700.0	2664.6	1.631	1.437	34.640	27.758	40.154	46.17	3.043	5558.8	1500.41	1.5
2750.0	2713.6	1.615	1.417	34.643	27.762	40.381	45.91	3.066	5708.7	1501.19	0.7
2800.0	2762.7	1.600	1.398	34.646	27.766	40.608	45.63	3.089	5859.6	1501.97	0.6
2850.0	2811.7	1.587	1.380	34.648	27.768	40.834	45.47	3.112	6011.6	1502.76	0.8
2900.0	2860.7	1.575	1.364	34.651	27.772	41.060	45.24	3.134	6164.7	1503.56	0.7
2950.0	2909.7	1.565	1.349	34.652	27.774	41.284	45.18	3.157	6318.9	1504.37	1.0
3000.0	2958.8	1.552	1.331	34.654	27.777	41.508	45.00	3.179	6474.2	1505.16	0.7
3050.0	3007.8	1.543	1.318	34.656	27.779	41.732	44.88	3.202	6630.5	1505.98	0.2
3100.0	3056.7	1.534	1.304	34.659	27.782	41.957	44.68	3.224	6787.9	1506.79	0.7
3150.0	3105.7	1.523	1.288	34.660	27.784	42.180	44.61	3.247	6946.4	1507.60	0.3
3200.0	3154.7	1.514	1.275	34.660	27.785	42.402	44.61	3.269	7105.9	1508.41	-0.8
3250.0	3203.6	1.510	1.266	34.663	27.788	42.625	44.48	3.291	7266.4	1509.25	-0.6
3300.0	3252.6	1.501	1.252	34.664	27.790	42.848	44.42	3.313	7428.1	1510.07	0.4
3350.0	3301.5	1.495	1.241	34.666	27.792	43.070	44.33	3.336	7590.7	1510.90	0.2
3400.0	3350.4	1.492	1.233	34.667	27.794	43.291	44.36	3.358	7754.5	1511.74	0.7
3450.0	3399.4	1.486	1.222	34.668	27.795	43.512	44.32	3.380	7919.2	1512.57	0.7
3500.0	3448.3	1.481	1.212	34.669	27.797	43.732	44.32	3.402	8085.1	1513.41	0.7
3550.0	3497.2	1.475	1.201	34.669	27.797	43.952	44.37	3.424	8251.9	1514.24	1.0
3600.0	3546.0	1.470	1.191	34.671	27.800	44.173	44.26	3.446	8419.8	1515.07	-0.3
3650.0	3594.9	1.469	1.185	34.672	27.801	44.393	44.31	3.469	8588.8	1515.93	0.6
3700.0	3643.8	1.467	1.178	34.673	27.802	44.612	44.35	3.491	8758.8	1516.78	-1.7
3750.0	3692.6										
3800.0	3741.5	1.463	1.163	34.675	27.805	45.050	44.39	3.534	9101.9	1518.49	0.5
3850.0	3790.3	1.463	1.158	34.676	27.806	45.268	44.45	3.557	9275.0	1519.35	0.2
3900.0	3839.1	1.461	1.150	34.675	27.806	45.485	44.63	3.579	9449.2	1520.20	0.1
3950.0	3887.9	1.459	1.143	34.677	27.808	45.704	44.58	3.601	9624.4	1521.05	1.0
4000.0	3936.7	1.459	1.137	34.678	27.809	45.921	44.64	3.623	9800.7	1521.92	0.7
4050.0	3985.5	1.460	1.133	34.678	27.809	46.137	44.78	3.646	9978.0	1522.78	-0.3
4100.0	4034.3	1.460	1.127	34.678	27.809	46.354	44.89	3.668	10156.3	1523.65	
4150.0	4083.1	1.460	1.121	34.679	27.811	46.571	44.97	3.691	10335.8	1524.51	0.1
4200.0	4131.8	1.462	1.118	34.679	27.811	46.786	45.12	3.713	10516.2	1525.38	
4250.0	4180.6	1.462	1.112	34.679	27.811	47.002	45.24	3.736	10697.8	1526.25	0.1
4300.0	4229.3	1.463	1.107	34.681	27.813	47.218	45.24	3.758	10880.4	1527.12	1.0
4350.0	4278.0	1.465	1.104	34.681	27.813	47.433	45.39	3.781	11064.1	1528.00	0.1
4400.0	4326.8	1.467	1.100	34.681	27.814	47.648	45.55	3.804	11248.8	1528.87	0.0
4450.0	4375.5	1.468	1.095	34.681	27.814	47.862	45.69	3.827	11434.6	1529.74	
4500.0	4424.2	1.470	1.091	34.682	27.815	48.077	45.78	3.849	11621.5	1530.62	0.1
4550.0	4472.9	1.473	1.088	34.682	27.815	48.291	45.94	3.872	11809.5	1531.50	0.4
4600.0	4521.5										
4650.0	4570.2	1.477	1.080	34.684	27.817	48.719	46.12	3.918	12188.6	1533.26	0.1
4700.0	4618.8	1.479	1.076	34.683	27.817	48.931	46.35	3.942	12379.8	1534.13	-0.3
4750.0	4667.5	1.482	1.073	34.683	27.817	49.144	46.50	3.965	12572.1	1535.01	
4800.0	4716.1	1.482	1.067	34.684	27.818	49.358	46.58	3.988	12765.5	1535.89	0.0
4850.0	4764.8	1.486	1.064	34.684	27.818	49.570	46.75	4.011	12959.9	1536.77	0.3
4900.0	4813.4	1.487	1.059	34.685	27.819	49.783	46.84	4.035	13155.5	1537.65	0.5
4950.0	4862.0	1.488	1.054	34.685	27.820	49.996	46.96	4.058	13352.1	1538.53	0.2
5000.0	4910.6	1.492	1.052	34.686	27.821	50.208	47.08	4.082	13549.9	1539.41	0.1
5050.0	4959.2	1.494	1.048	34.687	27.822	50.420	47.17	4.105	13748.7	1540.30	-0.2
5100.0	5007.7	1.498	1.045	34.686	27.821	50.630	47.42	4.129	13948.7	1541.18	-0.5
5150.0	5056.3	1.501	1.042	34.686	27.821	50.841	47.60	4.153	14149.7	1542.07	0.4
5200.0	5104.8	1.506	1.040	34.687	27.822	51.052	47.74	4.176	14351.9	1542.97	0.5
5250.0	5153.4	1.508	1.036	34.688	27.823	51.264	47.83	4.200	14555.2	1543.85	0.5
5300.0	5201.9	1.511	1.032	34.687	27.823	51.473	48.07	4.224	14759.6	1544.73	0.2
5350.0	5250.4	1.515	1.030	34.688	27.824	51.684	48.20	4.248	14965.2	1545.63	0.1
5400.0	5298.9	1.519	1.027	34.688	27.824	51.893	48.39	4.273	15171.8	1546.52	-0.9
5450.0	5347.4	1.524	1.025	34.688	27.824	52.102	48.59	4.297	15379.6	1547.41	0.1
5500.0	5395.9	1.528	1.023	34.690	27.826	52.313	48.66	4.321	15588.5	1548.31	0.8
5550.0	5444.4	1.532	1.020	34.690	27.826	52.522	48.84	4.345	15798.6	1549.20	0.1
5600.0	5492.9										
5650.0	5541.3	1.540	1.015	34.690	27.826	52.939	49.25	4.394	16222.1	1550.99	0.5
5700.0	5589.8	1.544	1.012	34.691	27.827	53.148	49.35	4.419	16435.6	1551.88	0.8
5750.0	5638.2	1.550	1.011	34.692	27.828	53.356	49.52	4.444	16650.2	1552.79	-1.0

28 JAN 81

CTD REPORT RAMA-4 STATION 23 CAST 1 DN
POSITION 30DEG 41 8MIN N 151DEG 58.4MIN E DATE 15 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
5800.0	5686.7	1.554	1.008	34.692	27.828	53.564	49.71	4.469	16866.0	1553.68	0.1
5850.0	5735.1	1.558	1.005	34.693	27.829	53.772	49.84	4.494	17082.9	1554.58	0.6
5900.0	5783.5	1.560	1.000	34.695	27.831	53.982	49.87	4.518	17301.0	1555.46	-0.8
5950.0	5831.9	1.568	1.001	34.693	27.830	54.187	50.27	4.544	17520.2	1556.37	

CTD REPORT RAMA-4 STATION 24 CAST 1 DN
POSITION: 30DEG 0.1MIN N 151DEG 59.8MIN E DATE 15 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	27.174	27.174	34.903	22.632	22.632	523.35	0.000	0.0	1539.28	
10.0	9.9	27.177	27.175	34.848	22.590	22.633	527.80	0.053	0.3	1539.39	313.9
20.0	19.8	25.919	25.914	35.252	23.284	23.369	461.97	0.104	1.0	1537.11	578.5
30.0	29.8	24.222	24.215	35.249	23.792	23.921	413.88	0.148	2.3	1533.22	351.3
40.0	39.7	23.277	23.268	35.176	24.013	24.185	393.19	0.188	4.0	1530.96	221.8
50.0	49.6	22.247	22.237	35.103	24.252	24.467	370.81	0.227	6.0	1528.41	180.1
60.0	59.5	21.703	21.691	35.079	24.386	24.645	358.40	0.264	8.5	1527.13	153.9
70.0	69.5	21.061	21.047	35.089	24.571	24.873	341.20	0.299	11.2	1525.59	161.4
80.0	79.4	20.450	20.434	35.068	24.721	25.067	327.29	0.332	14.4	1524.08	144.8
90.0	89.3	19.800	19.783	35.037	24.870	25.260	313.40	0.364	17.8	1522.42	116.8
100.0	99.2	19.485	19.466	35.049	24.962	25.396	305.01	0.395	21.6	1521.72	81.4
110.0	109.1	19.090	19.070	35.014	25.038	25.516	298.12	0.426	25.7	1520.73	59.6
120.0	119.1	18.781	18.759	34.971	25.084	25.606	294.01	0.455	30.0	1519.97	54.0
130.0	129.0	18.523	18.500	34.969	25.149	25.715	288.22	0.484	34.7	1519.39	52.0
140.0	138.9	18.211	18.186	34.921	25.191	25.801	284.52	0.513	39.7	1518.60	33.7
150.0	148.8	18.091	18.064	34.916	25.217	25.871	282.36	0.541	44.9	1518.41	28.4
160.0	158.7	17.833	17.805	34.873	25.249	25.947	279.68	0.570	50.4	1517.77	29.7
170.0	168.7	17.670	17.640	34.858	25.278	26.020	277.23	0.598	56.2	1517.44	25.0
180.0	178.6	17.554	17.523	34.849	25.299	26.086	275.49	0.625	62.3	1517.25	23.3
190.0	188.5	17.376	17.343	34.825	25.325	26.155	273.39	0.653	68.6	1516.86	25.8
200.0	198.4	17.146	17.112	34.787	25.352	26.226	271.13	0.680	75.2	1516.29	24.0
210.0	208.3	17.013	16.977	34.773	25.373	26.292	269.39	0.707	82.1	1516.04	22.4
220.0	218.2	16.836	16.799	34.748	25.397	26.360	267.46	0.734	89.2	1515.64	25.1
230.0	228.2	16.673	16.635	34.734	25.425	26.433	265.06	0.760	96.6	1515.30	25.6
240.0	238.1	16.529	16.489	34.720	25.448	26.500	263.12	0.787	104.3	1515.01	23.9
250.0	248.0	16.395	16.354	34.710	25.472	26.569	261.13	0.813	112.2	1514.75	25.9
260.0	257.9	16.254	16.211	34.703	25.500	26.641	258.76	0.839	120.4	1514.48	24.6
270.0	267.8	16.116	16.072	34.689	25.522	26.707	256.98	0.865	128.9	1514.20	20.6
280.0	277.7	15.994	15.949	34.678	25.542	26.771	255.36	0.891	137.6	1513.98	19.6
290.0	287.6	15.881	15.834	34.669	25.561	26.835	253.81	0.916	146.5	1513.78	23.6
300.0	297.6	15.733	15.685	34.662	25.590	26.908	251.34	0.941	155.7	1513.48	24.5
310.0	307.5	15.597	15.548	34.648	25.610	26.973	249.66	0.966	165.2	1513.20	18.8
320.0	317.4	15.513	15.462	34.643	25.626	27.033	248.48	0.991	174.9	1513.10	20.8
330.0	327.3	15.377	15.325	34.637	25.652	27.104	246.23	1.016	184.8	1512.83	23.0
340.0	337.2	15.230	15.177	34.619	25.671	27.168	244.64	1.041	195.0	1512.51	23.1
350.0	347.1	15.074	15.019	34.608	25.698	27.239	242.35	1.065	205.5	1512.17	27.0
360.0	357.0	14.903	14.847	34.594	25.725	27.312	239.98	1.089	216.1	1511.78	23.2
370.0	366.9	14.787	14.730	34.585	25.744	27.375	238.44	1.113	227.0	1511.56	23.1
380.0	376.8	14.612	14.554	34.570	25.770	27.447	236.08	1.137	238.2	1511.15	23.3
390.0	386.7	14.510	14.451	34.566	25.790	27.511	234.51	1.160	249.6	1510.98	25.2
400.0	396.7	14.335	14.275	34.557	25.821	27.587	231.75	1.184	261.2	1510.57	25.8
410.0	406.6	14.185	14.124	34.541	25.841	27.653	230.05	1.207	273.0	1510.23	23.1
420.0	416.5	14.011	13.949	34.525	25.865	27.723	227.87	1.230	285.1	1509.87	23.7
430.0	426.4	13.880	13.816	34.517	25.887	27.790	226.01	1.253	297.4	1509.54	33.2
440.0	436.3	13.622	13.558	34.504	25.931	27.880	221.94	1.275	309.9	1508.84	33.5
450.0	446.2	13.424	13.359	34.479	25.953	27.947	220.00	1.297	322.7	1508.32	24.6
460.0	456.1	13.272	13.206	34.472	25.979	28.019	217.70	1.319	335.6	1507.97	38.3
470.0	466.0	12.968	12.902	34.456	26.028	28.115	213.06	1.341	348.8	1507.10	37.7
480.0	475.9	12.748	12.681	34.430	26.052	28.185	210.87	1.362	362.2	1506.50	23.2
490.0	485.8	12.622	12.554	34.424	26.072	28.251	209.09	1.383	375.8	1506.23	26.5
500.0	495.7	12.448	12.379	34.420	26.103	28.328	206.24	1.404	389.6	1505.80	46.1
510.0	505.6	12.031	11.962	34.391	26.162	28.435	200.58	1.424	403.6	1504.51	43.5
520.0	515.5	11.845	11.776	34.378	26.187	28.507	198.25	1.444	417.8	1504.02	31.0
530.0	525.4	11.651	11.581	34.375	26.221	28.588	195.05	1.464	432.2	1503.50	36.0
540.0	535.3	11.399	11.329	34.360	26.257	28.671	191.69	1.483	446.7	1502.77	28.3
550.0	545.2	11.240	11.169	34.346	26.275	28.735	190.02	1.502	461.5	1502.37	24.8
560.0	555.1	11.070	10.998	34.343	26.304	28.811	187.35	1.521	476.5	1501.93	24.4
570.0	565.0	10.920	10.848	34.331	26.322	28.875	185.73	1.540	491.6	1501.55	24.9
580.0	574.9	10.661	10.588	34.308	26.350	28.951	182.97	1.558	507.0	1500.77	39.8
590.0	584.8	10.273	10.201	34.280	26.396	29.047	178.40	1.576	522.5	1499.51	38.4
600.0	594.7	10.043	9.971	34.262	26.422	29.120	175.92	1.594	538.2	1498.83	27.8
610.0	604.6	9.825	9.752	34.248	26.448	29.194	173.40	1.612	554.1	1498.16	37.9
620.0	614.5	9.505	9.433	34.238	26.493	29.288	168.93	1.629	570.1	1497.17	40.3
630.0	624.4	9.043	8.972	34.177	26.520	29.367	165.95	1.646	586.3	1495.55	23.8
640.0	634.3	8.823	8.751	34.148	26.532	29.427	164.70	1.662	602.7	1494.86	20.6
650.0	644.2	8.586	8.514	34.131	26.556	29.499	162.33	1.679	619.2	1494.12	26.2
660.0	654.1	8.356	8.285	34.116	26.579	29.571	159.97	1.695	635.9	1493.40	28.1
670.0	664.0	8.040	7.969	34.089	26.605	29.647	157.23	1.711	652.8	1492.33	29.2
680.0	673.9	7.807	7.736	34.078	26.631	29.721	154.64	1.726	669.8	1491.60	22.2
690.0	683.8	7.611	7.540	34.059	26.644	29.783	153.23	1.742	686.9	1490.98	19.3
700.0	693.7	7.430	7.359	34.052	26.664	29.852	151.22	1.757	704.2	1490.44	33.9
710.0	703.6	7.078	7.008	34.042	26.705	29.944	146.96	1.772	721.7	1489.23	39.8
720.0	713.5	6.762	6.693	34.026	26.735	30.024	143.77	1.786	739.3	1488.14	21.8
730.0	723.4	6.683	6.613	34.023	26.743	30.079	143.02	1.801	757.1	1487.99	21.7
740.0	733.3	6.435	6.365	34.021	26.774	30.160	139.83	1.815	774.9	1487.17	24.5
750.0	743.2	6.282	6.212	34.012	26.786	30.221	138.52	1.829	793.0	1486.72	15.3
760.0	753.1	6.166	6.096	34.011	26.800	30.282	137.14	1.843	811.1	1486.42	20.4
770.0	763.0	5.930	5.860	34.001	26.822	30.354	134.84	1.856	829.4	1485.62	22.6
780.0	772.9	5.808	5.738	34.005	26.840	30.420	133.03	1.870	847.9	1485.30	23.5
790.0	782.8	5.670	5.600	34.016	26.865	30.493	130.52	1.883	866.4	1484.93	24.4
800.0	792.6	5.531	5.461	34.020	26.885	30.561	128.53	1.896	885.1	1484.53	19.4
810.0	802.5	5.393	5.323	34.018	26.900	30.624	126.99	1.909	903.9	1484.14	23.3
820.0	812.4	5.220	5.150	34.027	26.927	30.700	124.24	1.922	922.9	1483.61	23.4
830.0	822.3	5.117	5.047	34.032	26.942	30.764	122.67	1.934	941.9	1483.36	12.4
840.0	832.2	5.097	5.026	34.038	26.950	30.817	122.08	1.946	961.1	1483.45	14.1
850.0	842.1	5.001	4.930	34.049	26.969	30.884	120.16	1.958	980.4	1483.23	18.0
860.0	852.0	4.919	4.848	34.055	26.983	30.945	118.80	1.970	999.9	1483.01	14.0
870.0	861.9	4.851	4.779	34.061	26.995	31.005	117.61	1.982	1019.4	1482.96	13.4
880.0	871.8	4.796	4.724	34.069	27.008	31.064	116.44	1.994	1039.1	1482.91	14.2
890.0	881.6	4.677	4.605	34.077	27.027	31.132	114.48	2.005	1058.8	1482.59	20.1
900.0	891.5	4.585	4.512	34.088	27.046	31.198	112.63	2.017	1078.7	1482.39	16.1
910.0	901.4	4.541	4.468	34.098	27.058	31.257	111.45	2.028	1098.7	1482.38	13.6
920.0	911.3	4.455	4.381	34.102	27.071	31.317	110.21	2.039	1118.8	1482.19	19.5
930.0	921.2	4.403	4.329	34.126	27.095	31.389	107.88	2.050	1139.0	1482.17	18.2
940.0	931.1	4.366	4.291	34.135	27.106	31.446	106.87	2.061	1159.3	1482.19	13.5
950.0	941.0	4.315	4.240	34.147	27.121	31.508	105.45	2.071	1179.8	1482.16	14.0
960.0	950.9	4.271	4.195	34.156	27.133	31.566	104.34	2.082	1200.3	1482.15	15.3
970.0	960.7	4.204	4.128	34.169	27.150	31.631	102.67	2.092	1220.9	1482.05	11.8

28 JAN 81

CTD REPORT RAMA-4 STATION: 24 CAST: 1 DN
POSITION: 30DEG 0.1MIN N 151DEG 59.8MIN E DATE: 15 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	4.174	4.097	34.171	27.155	31.682	102.25	2.103	1241.7	1482.09	7.3
990.0	980.5	4.138	4.061	34.177	27.164	31.737	101.47	2.113	1262.5	1482.12	10.7
1000.0	990.4	4.095	4.017	34.186	27.175	31.795	100.37	2.123	1283.4	1482.11	13.7
1050.0	1039.8	3.855	3.775	34.231	27.235	32.090	94.62	2.172	1389.5	1481.98	8.6
1100.0	1089.2	3.625	3.543	34.273	27.291	32.380	89.20	2.218	1497.9	1481.89	12.2
1150.0	1138.6	3.452	3.367	34.306	27.334	32.656	85.13	2.261	1608.6	1482.02	8.4
1200.0	1188.0	3.312	3.224	34.333	27.369	32.923	81.87	2.303	1721.2	1482.28	7.6
1250.0	1237.3	3.166	3.075	34.365	27.408	33.195	78.17	2.343	1835.9	1482.52	5.9
1300.0	1286.7	3.081	2.987	34.379	27.427	33.444	76.48	2.381	1952.5	1483.00	2.1
1350.0	1336.0	2.956	2.859	34.399	27.454	33.704	73.89	2.419	2071.0	1483.31	5.8
1400.0	1385.4	2.835	2.736	34.420	27.481	33.963	71.24	2.455	2191.2	1483.64	4.7
1450.0	1434.7	2.720	2.618	34.440	27.507	34.221	68.75	2.490	2313.2	1484.00	4.0
1500.0	1484.0	2.644	2.539	34.456	27.527	34.471	66.97	2.524	2436.9	1484.52	3.8
1550.0	1533.3	2.539	2.431	34.473	27.549	34.725	64.78	2.557	2562.1	1484.91	4.9
1600.0	1582.6	2.468	2.357	34.490	27.569	34.974	62.95	2.589	2689.0	1485.45	3.9
1650.0	1631.9	2.396	2.281	34.503	27.585	35.221	61.43	2.620	2817.4	1485.99	3.6
1700.0	1681.2	2.343	2.225	34.512	27.597	35.461	60.39	2.651	2947.3	1486.60	1.7
1750.0	1730.5	2.286	2.165	34.524	27.611	35.705	59.08	2.681	3078.6	1487.19	2.9
1800.0	1779.7	2.207	2.082	34.539	27.630	35.953	57.29	2.710	3211.3	1487.70	2.5
1850.0	1829.0	2.154	2.026	34.546	27.640	36.192	56.36	2.738	3345.5	1488.31	2.8
1900.0	1878.2	2.113	1.981	34.554	27.649	36.430	55.50	2.766	3481.0	1488.97	2.3
1950.0	1927.4	2.060	1.925	34.562	27.660	36.669	54.51	2.794	3617.8	1489.59	2.6
2000.0	1976.6	2.015	1.876	34.571	27.671	36.908	53.51	2.821	3756.0	1490.24	2.3
2050.0	2025.8	1.978	1.836	34.578	27.680	37.144	52.75	2.847	3895.4	1490.92	2.0
2100.0	2075.0	1.943	1.797	34.583	27.687	37.378	52.17	2.874	4036.1	1491.61	1.1
2150.0	2124.2	1.906	1.756	34.590	27.695	37.614	51.40	2.899	4178.1	1492.29	1.3
2200.0	2173.4	1.881	1.727	34.595	27.701	37.846	50.91	2.925	4321.3	1493.03	1.3
2250.0	2222.6	1.857	1.699	34.601	27.708	38.079	50.37	2.950	4465.7	1493.77	2.0
2300.0	2271.7	1.823	1.662	34.606	27.715	38.312	49.75	2.975	4611.3	1494.46	2.1
2350.0	2320.9	1.795	1.630	34.610	27.720	38.543	49.29	3.000	4758.1	1495.19	1.1
2400.0	2370.0	1.769	1.600	34.614	27.726	38.774	48.86	3.025	4906.1	1495.92	1.4
2450.0	2419.1	1.737	1.564	34.619	27.732	39.006	48.26	3.049	5055.3	1496.63	1.5
2500.0	2468.2	1.714	1.537	34.624	27.738	39.237	47.77	3.073	5205.6	1497.37	0.9
2550.0	2517.3	1.701	1.520	34.626	27.741	39.464	47.61	3.097	5357.0	1498.16	1.1
2600.0	2566.4	1.673	1.488	34.631	27.747	39.695	47.06	3.120	5509.6	1498.89	1.6
2650.0	2615.5	1.658	1.468	34.634	27.751	39.923	46.80	3.144	5663.3	1499.67	1.3
2700.0	2664.6	1.643	1.449	34.637	27.755	40.150	46.54	3.167	5818.2	1500.46	0.8
2750.0	2713.6	1.629	1.431	34.639	27.758	40.376	46.38	3.190	5974.1	1501.24	0.8
2800.0	2762.7	1.621	1.418	34.643	27.762	40.603	46.15	3.213	6131.2	1502.06	1.4
2850.0	2811.7	1.608	1.401	34.645	27.765	40.828	45.97	3.236	6289.3	1502.85	1.0
2900.0	2860.7	1.600	1.388	34.648	27.768	41.053	45.80	3.259	6448.5	1503.67	0.3
2950.0	2909.7	1.589	1.372	34.649	27.770	41.278	45.73	3.282	6608.8	1504.47	0.4
3000.0	2958.8	1.582	1.361	34.650	27.771	41.501	45.70	3.305	6770.3	1505.29	1.1
3050.0	3007.8	1.573	1.347	34.652	27.774	41.725	45.57	3.328	6932.7	1506.10	0.8
3100.0	3056.7	1.558	1.328	34.653	27.776	41.949	45.44	3.351	7096.3	1506.89	0.5
3150.0	3105.7	1.552	1.317	34.654	27.778	42.171	45.43	3.373	7261.0	1507.72	0.1
3200.0	3154.7	1.547	1.307	34.656	27.780	42.394	45.36	3.396	7426.7	1508.55	0.6
3250.0	3203.6	1.539	1.294	34.658	27.782	42.617	45.25	3.419	7593.5	1509.37	0.2
3300.0	3252.6	1.532	1.282	34.659	27.784	42.839	45.22	3.441	7761.4	1510.20	0.6
3350.0	3301.5	1.526	1.271	34.661	27.786	43.061	45.13	3.464	7930.3	1511.03	0.2
3400.0	3350.4	1.522	1.262	34.662	27.788	43.282	45.14	3.487	8100.3	1511.86	0.7
3450.0	3399.4	1.516	1.251	34.663	27.789	43.503	45.12	3.509	8271.4	1512.70	0.6
3500.0	3448.3	1.507	1.237	34.664	27.791	43.725	45.05	3.532	8443.6	1513.51	0.1
3550.0	3497.2	1.503	1.228	34.666	27.793	43.946	44.98	3.554	8616.8	1514.36	-0.2
3600.0	3546.0	1.498	1.218	34.667	27.795	44.166	44.97	3.577	8791.0	1515.19	0.1
3650.0	3594.9	1.496	1.211	34.668	27.796	44.385	45.00	3.599	8966.3	1516.04	0.6
3700.0	3643.8	1.491	1.201	34.670	27.798	44.606	44.91	3.622	9142.7	1516.88	-0.1
3750.0	3692.6	1.490	1.195	34.670	27.799	44.824	45.04	3.644	9320.2	1517.74	0.0
3800.0	3741.5	1.485	1.184	34.670	27.799	45.042	45.08	3.667	9498.7	1518.57	0.3
3850.0	3790.3	1.480	1.174	34.672	27.802	45.262	45.00	3.689	9678.3	1519.42	0.1
3900.0	3839.1	1.480	1.169	34.673	27.803	45.480	45.06	3.712	9858.9	1520.28	-0.3
3950.0	3887.9	1.479	1.162	34.674	27.804	45.698	45.11	3.734	10040.6	1521.14	0.5
4000.0	3936.7	1.478	1.156	34.674	27.804	45.915	45.23	3.757	10223.3	1521.99	0.3
4050.0	3985.5	1.478	1.150	34.675	27.806	46.132	45.26	3.779	10407.2	1522.86	0.6
4100.0	4034.3	1.478	1.145	34.675	27.806	46.348	45.39	3.802	10592.1	1523.72	0.5
4150.0	4083.1	1.479	1.140	34.676	27.807	46.565	45.47	3.825	10778.0	1524.59	0.1
4200.0	4131.8	1.478	1.133	34.677	27.808	46.782	45.51	3.847	10965.0	1525.45	0.5
4250.0	4180.6	1.478	1.128	34.677	27.809	46.997	45.63	3.870	11153.1	1526.32	0.1
4300.0	4229.3	1.477	1.121	34.678	27.810	47.213	45.68	3.893	11342.3	1527.18	0.2
4350.0	4278.0	1.478	1.116	34.679	27.811	47.429	45.75	3.916	11532.5	1528.05	0.1
4400.0	4326.8	1.480	1.112	34.679	27.811	47.644	45.91	3.939	11723.8	1528.92	0.1
4450.0	4375.5	1.481	1.107	34.679	27.812	47.858	46.04	3.962	11916.2	1529.80	-0.7
4500.0	4424.2	1.483	1.103	34.680	27.813	48.073	46.13	3.985	12109.7	1530.67	0.1
4550.0	4472.9	1.484	1.099	34.681	27.814	48.288	46.19	4.008	12304.2	1531.55	0.2
4600.0	4521.5	1.486	1.095	34.681	27.814	48.502	46.35	4.031	12499.9	1532.42	0.0
4650.0	4570.2	1.488	1.091	34.681	27.814	48.715	46.53	4.054	12696.6	1533.30	0.1
4700.0	4618.8	1.491	1.087	34.682	27.815	48.928	46.62	4.077	12894.4	1534.18	0.1
4750.0	4667.5	1.492	1.082	34.682	27.816	49.142	46.75	4.101	13093.3	1535.06	0.0
4800.0	4716.1	1.494	1.078	34.683	27.817	49.355	46.85	4.124	13293.3	1535.94	-0.1
4850.0	4764.8	1.497	1.075	34.683	27.817	49.567	47.02	4.148	13494.4	1536.82	-0.1
4900.0	4813.4	1.499	1.071	34.683	27.817	49.780	47.17	4.171	13696.5	1537.70	0.4
4950.0	4862.0	1.501	1.067	34.684	27.818	49.992	47.25	4.195	13899.8	1538.58	0.2
5000.0	4910.6	1.503	1.062	34.685	27.819	50.205	47.35	4.218	14104.2	1539.46	0.1
5050.0	4959.2	1.507	1.060	34.684	27.819	50.415	47.60	4.242	14309.7	1540.35	0.1
5100.0	5007.7	1.511	1.058	34.685	27.820	50.627	47.73	4.266	14516.3	1541.24	0.1
5150.0	5056.3	1.513	1.053	34.685	27.820	50.838	47.89	4.290	14724.1	1542.12	0.5
5200.0	5104.8	1.517	1.051	34.686	27.821	51.049	48.01	4.314	14932.9	1543.01	0.0
5250.0	5153.4	1.521	1.048	34.685	27.820	51.259	48.27	4.338	15142.9	1543.90	0.5
5300.0	5201.9	1.524	1.045	34.687	27.822	51.470	48.32	4.362	15354.0	1544.79	0.1
5350.0	5250.4	1.527	1.041	34.687	27.822	51.680	48.48	4.386	15566.2	1545.68	0.0
5400.0	5298.9	1.530	1.038	34.687	27.822	51.890	48.66	4.411	15779.5	1546.56	0.3
5450.0	5347.4	1.535	1.036	34.687	27.823	52.099	48.88	4.435	15994.0	1547.46	0.1
5500.0	5395.9	1.539	1.033	34.686	27.822	52.308	49.13	4.459	16209.6	1548.35	0.1
5550.0	5444.4	1.542	1.030	34.687	27.823	52.517	49.25	4.484	16426.4	1549.24	0.2
5600.0	5492.9	1.545	1.026	34.688	27.824	52.727	49.34	4.509	16644.3	1550.13	0.1
5650.0	5541.3	1.549	1.023	34.688	27.824	52.936	49.53	4.533	16863.3	1551.02	0.5
5700.0	5589.8	1.554	1.021	34.688	27.824	53.144	49.75	4.558	17083.5	1551.92	-0.7
5750.0	5638.2	1.558	1.019	34.689	27.825	53.352	49.88	4.583	17304.9	1552.82	0.1

CTD REPORT RAMA-4 STATION: 24 CAST: 1 DN
POSITION: 30DEG 0.1MIN N 151DEG 59.8MIN E DATE: 15 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
5800.0	5686.7	1.560	1.014	34.690	27.826	53.561	49.96	4.608	17527.4	1553.70	0.2
5850.0	5735.1	1.564	1.011	34.690	27.827	53.769	50.16	4.633	17751.0	1554.60	0.1
5900.0	5783.5	1.569	1.009	34.690	27.827	53.976	50.38	4.658	17975.9	1555.50	0.0

CTD REPORT RAMA-4 STATION: 25 CAST: 1 DN
POSITION: 29DEG 14.1MIN N 152DEG 0.2MIN E DATE: 16 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	28.311	28.311	35.280	22.556	22.556	530.65	0.000	0.0	1542.19	
10.0	9.9	28.284	28.281	35.323	22.597	22.640	527.16	0.053	0.3	1542.34	62.9
20.0	19.8	28.041	28.036	35.337	22.686	22.771	519.16	0.105	1.0	1541.99	228.4
30.0	29.8	26.697	26.690	35.287	23.072	23.199	482.77	0.157	2.3	1539.10	512.7
40.0	39.7	24.249	24.240	35.203	23.750	23.921	418.34	0.203	4.1	1533.40	466.3
50.0	49.6	23.140	23.129	35.157	24.039	24.253	391.19	0.243	6.4	1530.75	294.6
60.0	59.5	21.694	21.682	35.042	24.361	24.619	360.85	0.281	9.0	1527.06	256.8
70.0	69.5	21.276	21.262	35.167	24.571	24.873	341.17	0.316	11.9	1526.26	201.6
80.0	79.4	20.373	20.357	35.117	24.778	25.124	321.78	0.350	15.2	1523.93	178.9
90.0	89.3	19.989	19.972	35.197	24.942	25.332	306.59	0.381	18.8	1523.13	119.7
100.0	99.2	19.604	19.585	35.174	25.026	25.460	298.93	0.411	22.8	1522.20	56.3
110.0	109.1	19.426	19.405	35.154	25.058	25.535	296.28	0.441	27.0	1521.84	22.7
120.0	119.1	19.333	19.311	35.141	25.072	25.593	295.27	0.471	31.5	1521.73	29.5
130.0	129.0	18.980	18.956	35.081	25.118	25.683	291.24	0.500	36.3	1520.82	40.3
140.0	138.9	18.716	18.691	35.040	25.154	25.763	288.09	0.529	41.5	1520.19	28.7
150.0	148.8	18.545	18.518	35.011	25.176	25.829	286.39	0.558	46.8	1519.83	25.8
160.0	158.7	18.313	18.284	34.974	25.207	25.904	283.80	0.586	52.5	1519.28	25.5
170.0	168.7	18.165	18.135	34.953	25.228	25.969	282.10	0.615	58.5	1518.99	30.7
180.0	178.6	17.860	17.828	34.907	25.269	26.054	278.51	0.643	64.7	1518.21	35.8
190.0	188.5	17.600	17.567	34.864	25.300	26.130	275.81	0.671	71.2	1517.56	29.7
200.0	198.4	17.471	17.436	34.860	25.329	26.203	273.39	0.698	78.0	1517.34	26.6
210.0	208.3	17.424	17.388	34.878	25.355	26.272	271.32	0.725	85.1	1517.39	20.9
220.0	218.2	17.454	17.416	34.910	25.372	26.333	270.02	0.752	92.4	1517.68	9.4
230.0	228.2	17.457	17.417	34.913	25.374	26.378	270.20	0.779	100.0	1517.85	2.3
240.0	238.1	17.412	17.371	34.901	25.376	26.424	270.32	0.806	107.8	1517.87	12.9
250.0	248.0	17.176	17.133	34.856	25.399	26.492	268.41	0.833	116.0	1517.28	19.3
260.0	257.9	16.993	16.949	34.818	25.414	26.552	267.23	0.860	124.4	1516.85	22.1
270.0	267.8	16.759	16.714	34.782	25.443	26.625	264.78	0.887	133.0	1516.27	19.2
280.0	277.7	16.684	16.637	34.771	25.452	26.678	264.17	0.913	141.9	1516.19	12.9
290.0	287.6	16.560	16.512	34.753	25.468	26.739	262.96	0.940	151.1	1515.96	14.6
300.0	297.6	16.505	16.455	34.753	25.482	26.796	262.02	0.966	160.6	1515.96	9.3
310.0	307.5	16.465	16.414	34.747	25.487	26.845	261.86	0.992	170.3	1515.99	12.4
320.0	317.4	16.334	16.281	34.732	25.506	26.909	260.28	1.018	180.2	1515.74	16.7
330.0	327.3	16.224	16.170	34.716	25.520	26.967	259.26	1.044	190.5	1515.55	26.1
340.0	337.2	16.000	15.945	34.698	25.558	27.050	255.85	1.070	200.9	1515.00	29.4
350.0	347.1	15.859	15.802	34.682	25.578	27.115	254.15	1.095	211.7	1514.71	31.0
360.0	357.0	15.598	15.540	34.658	25.619	27.201	250.43	1.121	222.6	1514.04	32.5
370.0	366.9	15.418	15.359	34.635	25.643	27.270	248.43	1.146	233.9	1513.61	31.7
380.0	376.8	15.193	15.133	34.621	25.682	27.355	244.84	1.170	245.3	1513.05	43.1
390.0	386.7	14.883	14.823	34.591	25.728	27.447	240.61	1.195	257.1	1512.20	45.3
400.0	396.7	14.619	14.558	34.573	25.772	27.537	236.57	1.219	269.0	1511.50	32.1
410.0	406.6	14.474	14.412	34.557	25.791	27.601	234.95	1.242	281.2	1511.18	27.2
420.0	416.5	14.265	14.202	34.543	25.825	27.681	231.85	1.266	293.6	1510.65	36.7
430.0	426.4	13.993	13.929	34.517	25.863	27.765	228.35	1.289	306.3	1509.90	37.1
440.0	436.3	13.741	13.676	34.493	25.898	27.846	225.17	1.311	319.2	1509.22	33.6
450.0	446.2	13.547	13.482	34.481	25.929	27.923	222.35	1.334	332.3	1508.73	30.2
460.0	456.1	13.398	13.332	34.478	25.957	27.996	219.82	1.356	345.6	1508.40	30.0
470.0	466.0	13.180	13.113	34.459	25.987	28.073	217.07	1.378	359.1	1507.81	29.9
480.0	475.9	13.000	12.932	34.448	26.015	28.147	214.53	1.399	372.9	1507.37	30.7
490.0	485.8	12.784	12.715	34.433	26.047	28.225	211.61	1.421	386.8	1506.79	27.8
500.0	495.7	12.615	12.546	34.418	26.069	28.293	209.64	1.442	401.0	1506.36	32.5
510.0	505.6	12.334	12.264	34.399	26.110	28.380	205.80	1.463	415.4	1505.55	41.9
520.0	515.5	12.026	11.956	34.374	26.150	28.468	201.96	1.483	430.0	1504.63	32.5
530.0	525.4	11.893	11.822	34.370	26.172	28.536	199.96	1.503	444.8	1504.33	32.8
540.0	535.3	11.579	11.508	34.346	26.213	28.625	196.05	1.523	459.7	1503.38	29.9
550.0	545.2	11.390	11.318	34.321	26.228	28.687	194.60	1.543	474.9	1502.86	18.1
560.0	555.1	11.268	11.196	34.315	26.246	28.751	193.02	1.562	490.3	1502.59	25.0
570.0	565.0	11.013	10.940	34.293	26.276	28.828	190.20	1.581	505.9	1501.83	34.9
580.0	574.9	10.766	10.693	34.283	26.312	28.912	186.68	1.600	521.6	1501.11	42.7
590.0	584.8	10.414	10.341	34.260	26.356	29.005	182.33	1.618	537.5	1499.99	34.4
600.0	594.7	10.209	10.136	34.240	26.376	29.072	180.41	1.637	553.6	1499.40	27.0
610.0	604.6	9.948	9.875	34.221	26.406	29.150	177.49	1.654	569.9	1498.60	30.2
620.0	614.5	9.753	9.679	34.213	26.433	29.224	174.95	1.672	586.4	1498.04	26.3
630.0	624.4	9.487	9.414	34.184	26.454	29.294	172.78	1.690	603.0	1497.20	27.3
640.0	634.3	9.294	9.220	34.180	26.482	29.370	170.04	1.707	619.8	1496.65	25.3
650.0	644.2	9.086	9.012	34.160	26.500	29.436	168.26	1.724	636.8	1496.02	26.0
660.0	654.1	8.829	8.755	34.145	26.529	29.514	165.37	1.740	654.0	1495.21	33.9
670.0	664.0	8.512	8.439	34.124	26.562	29.596	162.03	1.757	671.3	1494.16	26.4
680.0	673.9	8.392	8.318	34.120	26.577	29.658	160.59	1.773	688.7	1493.87	13.5
690.0	683.8	8.302	8.227	34.114	26.586	29.714	159.78	1.789	706.4	1493.69	21.2
700.0	693.7	8.040	7.966	34.101	26.615	29.792	156.83	1.805	724.1	1492.84	33.0
710.0	703.6	7.792	7.718	34.094	26.646	29.872	153.71	1.820	742.1	1492.05	28.5
720.0	713.5	7.575	7.501	34.080	26.666	29.941	151.63	1.836	760.2	1491.36	30.8
730.0	723.4	7.266	7.193	34.069	26.701	30.026	148.02	1.851	778.4	1490.32	26.5
740.0	733.3	7.156	7.082	34.066	26.714	30.086	146.77	1.865	796.8	1490.05	17.2
750.0	743.2	6.999	6.925	34.061	26.731	30.152	145.01	1.880	815.3	1489.60	25.1
760.0	753.1	6.695	6.622	34.042	26.757	30.229	142.19	1.894	834.0	1488.55	24.0
770.0	763.0	6.563	6.490	34.040	26.773	30.292	140.62	1.909	852.8	1488.19	17.8
780.0	772.9	6.440	6.366	34.040	26.789	30.356	139.03	1.923	871.8	1487.87	27.9
790.0	782.8	6.167	6.094	34.039	26.823	30.441	135.47	1.936	890.8	1486.95	30.9
800.0	792.6	6.018	5.945	34.043	26.844	30.511	133.29	1.950	910.1	1486.52	19.3
810.0	802.5	5.941	5.867	34.048	26.858	30.571	132.00	1.963	929.4	1486.38	19.0
820.0	812.4	5.817	5.743	34.056	26.879	30.640	129.88	1.976	948.9	1486.06	15.3
830.0	822.3	5.782	5.708	34.059	26.886	30.693	129.29	1.989	968.5	1486.09	15.4
840.0	832.2	5.638	5.564	34.064	26.908	30.763	127.14	2.002	988.2	1485.68	19.0
850.0	842.1	5.559	5.484	34.069	26.921	30.824	125.84	2.015	1008.1	1485.53	10.8
860.0	852.0	5.503	5.428	34.068	26.927	30.876	125.31	2.027	1028.1	1485.46	20.7
870.0	861.9	5.330	5.255	34.083	26.959	30.957	122.06	2.040	1048.2	1484.94	27.9
880.0	871.8	5.216	5.141	34.091	26.978	31.025	120.12	2.052	1068.4	1484.65	25.6
890.0	881.6	5.065	4.990	34.104	27.006	31.101	117.33	2.064	1088.8	1484.22	19.4
900.0	891.5	5.016	4.940	34.107	27.014	31.156	116.57	2.075	1109.2	1484.18	10.9
910.0	901.4	4.958	4.882	34.114	27.026	31.215	115.44	2.087	1129.8	1484.12	11.6
920.0	911.3	4.891	4.814	34.116	27.035	31.271	114.56	2.099	1150.5	1484.01	11.7
930.0	921.2	4.842	4.765	34.125	27.048	31.330	113.38	2.110	1171.3	1483.98	24.4
940.0	931.1	4.691	4.614	34.146	27.081	31.412	110.03	2.121	1192.2	1483.55	22.5
950.0	941.0	4.643	4.565	34.150	27.089	31.468	109.23	2.132	1213.2	1483.52	10.0
960.0	950.9	4.566	4.488	34.151	27.098	31.524	108.30	2.143	1234.4	1483.37	13.3
970.0	960.7	4.430	4.352	34.149	27.111	31.586	106.87	2.154	1255.6	1482.97	14.4

CTD REPORT RAMA-4 STATION 25 CAST 1 DN
POSITION 29DEG 14.1MIN N 152DEG 0.2MIN E DATE 16 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	4.346	4.268	34.152	27.122	31.645	105.73	2.164	1277.0	1482.79	13.0
990.0	980.5	4.297	4.219	34.161	27.135	31.704	104.56	2.175	1298.4	1482.76	13.6
1000.0	990.4	4.239	4.160	34.170	27.148	31.764	103.28	2.185	1319.9	1482.69	14.4
1050.0	1039.8	4.007	3.926	34.212	27.205	32.055	97.82	2.236	1429.2	1482.60	8.4
1100.0	1089.2	3.779	3.695	34.255	27.262	32.347	92.34	2.283	1540.8	1482.51	10.2
1150.0	1138.6	3.608	3.522	34.290	27.306	32.624	88.13	2.328	1654.7	1482.66	9.3
1200.0	1188.0	3.446	3.357	34.327	27.351	32.902	83.88	2.371	1770.7	1482.84	9.8
1250.0	1237.3	3.286	3.194	34.361	27.394	33.177	79.86	2.412	1888.8	1483.03	6.9
1300.0	1286.7	3.187	3.092	34.391	27.427	33.441	76.83	2.451	2008.8	1483.46	6.1
1350.0	1336.0	3.077	2.979	34.404	27.447	33.693	74.91	2.489	2130.8	1483.84	4.2
1400.0	1385.4	2.939	2.838	34.429	27.480	33.957	71.79	2.526	2254.5	1484.10	6.0
1450.0	1434.7	2.849	2.745	34.445	27.500	34.209	69.87	2.562	2380.0	1484.56	5.0
1500.0	1484.0	2.766	2.659	34.459	27.519	34.458	68.16	2.596	2507.2	1485.05	4.7
1550.0	1533.3	2.651	2.541	34.477	27.543	34.714	65.77	2.630	2636.0	1485.40	4.4
1600.0	1582.6	2.561	2.448	34.491	27.562	34.964	63.96	2.662	2766.4	1485.86	4.4
1650.0	1631.9	2.477	2.361	34.501	27.577	35.209	62.51	2.694	2898.4	1486.34	2.9
1700.0	1681.2	2.384	2.265	34.513	27.594	35.457	60.80	2.725	3031.9	1486.78	3.0
1750.0	1730.5	2.309	2.187	34.526	27.611	35.704	59.20	2.755	3166.9	1487.30	3.5
1800.0	1779.7	2.240	2.115	34.538	27.626	35.949	57.74	2.784	3303.3	1487.84	3.9
1850.0	1829.0	2.179	2.051	34.546	27.638	36.189	56.66	2.813	3441.1	1488.42	2.6
1900.0	1878.2	2.120	1.988	34.557	27.651	36.431	55.37	2.841	3580.2	1489.01	2.8
1950.0	1927.4	2.073	1.938	34.567	27.663	36.672	54.30	2.868	3720.7	1489.65	2.9
2000.0	1976.6	2.015	1.876	34.573	27.673	36.910	53.37	2.895	3862.5	1490.24	2.0
2050.0	2025.8	1.982	1.840	34.581	27.682	37.146	52.58	2.921	4005.6	1490.94	2.1
2100.0	2075.0	1.941	1.795	34.587	27.690	37.381	51.86	2.947	4149.9	1491.60	1.6
2150.0	2124.2	1.909	1.759	34.593	27.697	37.616	51.21	2.973	4295.5	1492.31	2.3
2200.0	2173.4	1.869	1.716	34.601	27.707	37.852	50.33	2.999	4442.4	1492.98	1.9
2250.0	2222.6	1.841	1.684	34.606	27.713	38.085	49.81	3.024	4590.4	1493.70	2.2
2300.0	2271.7	1.817	1.656	34.611	27.719	38.317	49.32	3.048	4739.6	1494.44	1.5
2350.0	2320.9	1.791	1.626	34.617	27.726	38.549	48.74	3.073	4890.0	1495.18	1.6
2400.0	2370.0	1.761	1.592	34.622	27.733	38.781	48.17	3.097	5041.6	1495.89	1.2
2450.0	2419.1	1.738	1.565	34.627	27.739	39.012	47.70	3.121	5194.3	1496.64	0.4
2500.0	2468.2	1.720	1.543	34.630	27.743	39.241	47.41	3.145	5348.1	1497.41	1.2
2550.0	2517.3	1.697	1.516	34.634	27.748	39.471	46.99	3.169	5503.1	1498.15	1.1
2600.0	2566.4	1.681	1.495	34.636	27.751	39.698	46.80	3.192	5659.2	1498.93	0.8
2650.0	2615.5	1.660	1.470	34.639	27.755	39.926	46.47	3.215	5816.5	1499.69	0.3
2700.0	2664.6	1.642	1.448	34.642	27.759	40.154	46.17	3.238	5974.8	1500.46	0.8
2750.0	2713.6	1.629	1.431	34.645	27.762	40.381	45.94	3.261	6134.2	1501.25	0.4
2800.0	2762.7	1.614	1.411	34.648	27.766	40.607	45.69	3.284	6294.7	1502.03	0.8
2850.0	2811.7	1.606	1.399	34.649	27.768	40.832	45.66	3.307	6456.4	1502.85	0.6
2900.0	2860.7	1.589	1.377	34.652	27.772	41.058	45.36	3.330	6619.1	1503.63	0.8
2950.0	2909.7	1.580	1.364	34.653	27.774	41.282	45.32	3.353	6782.8	1504.44	0.7
3000.0	2958.9	1.571	1.350	34.655	27.776	41.506	45.20	3.375	6947.7	1505.25	0.8
3050.0	3007.8	1.564	1.338	34.656	27.778	41.729	45.17	3.398	7113.6	1506.07	-0.1
3100.0	3056.7	1.558	1.328	34.657	27.779	41.952	45.17	3.420	7280.6	1506.90	0.8
3150.0	3105.7	1.552	1.317	34.659	27.782	42.175	45.08	3.443	7448.7	1507.72	0.8
3200.0	3154.7	1.541	1.301	34.660	27.783	42.398	44.99	3.466	7617.8	1508.53	0.4
3250.0	3203.6	1.533	1.288	34.661	27.785	42.620	44.94	3.488	7788.0	1509.35	1.1
3300.0	3252.6	1.525	1.275	34.664	27.788	42.844	44.75	3.510	7959.3	1510.17	0.4
3350.0	3301.5	1.517	1.263	34.664	27.789	43.065	44.79	3.533	8131.6	1510.99	0.3
3400.0	3350.4	1.510	1.251	34.666	27.792	43.287	44.68	3.555	8305.0	1511.82	0.3
3450.0	3399.4	1.506	1.242	34.667	27.793	43.508	44.69	3.578	8479.4	1512.66	0.6
3500.0	3448.3	1.501	1.232	34.668	27.795	43.728	44.69	3.600	8654.9	1513.49	0.2
3550.0	3497.2	1.498	1.223	34.668	27.795	43.948	44.78	3.622	8831.4	1514.34	0.6
3600.0	3546.0	1.492	1.212	34.670	27.797	44.169	44.67	3.645	9009.0	1515.17	0.3
3650.0	3594.9	1.487	1.202	34.670	27.798	44.388	44.73	3.667	9187.7	1516.01	-0.3
3700.0	3643.8	1.487	1.197	34.672	27.800	44.608	44.70	3.689	9367.4	1516.87	0.6
3750.0	3692.6	1.485	1.190	34.672	27.801	44.826	44.81	3.712	9548.1	1517.72	0.1
3800.0	3741.5	1.481	1.180	34.673	27.802	45.045	44.82	3.734	9730.0	1518.56	-0.3
3850.0	3790.3	1.479	1.173	34.674	27.803	45.264	44.85	3.757	9912.8	1519.41	-0.2
3900.0	3839.1	1.477	1.166	34.674	27.804	45.481	44.94	3.779	10096.8	1520.27	0.5
3950.0	3887.9	1.475	1.158	34.675	27.805	45.699	44.98	3.801	10281.7	1521.12	0.3
4000.0	3936.7	1.473	1.151	34.676	27.806	45.917	45.00	3.824	10467.8	1521.97	0.3
4050.0	3985.5	1.470	1.142	34.677	27.808	46.135	45.00	3.846	10654.9	1522.83	0.4
4100.0	4034.3	1.468	1.135	34.677	27.808	46.352	45.10	3.869	10843.0	1523.68	0.4
4150.0	4083.1	1.468	1.129	34.678	27.809	46.568	45.17	3.891	11032.3	1524.55	0.1
4200.0	4131.8	1.469	1.125	34.678	27.810	46.784	45.30	3.914	11222.5	1525.41	0.5
4250.0	4180.6	1.467	1.117	34.679	27.811	47.001	45.32	3.937	11413.9	1526.27	0.6
4300.0	4229.3	1.467	1.111	34.680	27.812	47.217	45.37	3.959	11606.3	1527.14	0.0
4350.0	4278.0	1.468	1.106	34.680	27.812	47.432	45.51	3.982	11799.7	1528.01	0.2
4400.0	4326.8	1.470	1.103	34.680	27.813	47.646	45.67	4.005	11994.3	1528.88	0.1
4450.0	4375.5	1.471	1.098	34.681	27.814	47.862	45.74	4.028	12189.9	1529.75	-0.4
4500.0	4424.2	1.473	1.094	34.682	27.815	48.076	45.82	4.051	12386.6	1530.63	0.1
4550.0	4472.9	1.474	1.089	34.682	27.815	48.290	45.96	4.074	12584.3	1531.50	0.2
4600.0	4521.5	1.475	1.084	34.682	27.815	48.504	46.11	4.097	12783.1	1532.38	0.5
4650.0	4570.2	1.479	1.082	34.683	27.816	48.718	46.23	4.120	12983.0	1533.26	-0.3
4700.0	4618.8	1.481	1.078	34.683	27.817	48.931	46.37	4.143	13184.0	1534.14	0.0
4750.0	4667.5	1.483	1.074	34.683	27.817	49.144	46.53	4.166	13386.1	1535.02	0.1
4800.0	4716.1	1.486	1.071	34.683	27.817	49.356	46.72	4.189	13589.3	1535.90	0.5
4850.0	4764.8	1.487	1.065	34.684	27.818	49.570	46.78	4.213	13793.5	1536.78	0.1
4900.0	4813.4	1.490	1.062	34.684	27.819	49.782	46.96	4.236	13998.8	1537.66	0.1
4950.0	4862.0	1.493	1.059	34.684	27.819	49.994	47.11	4.260	14205.3	1538.55	0.1
5000.0	4910.6	1.496	1.056	34.685	27.820	50.206	47.23	4.283	14412.8	1539.43	-0.2
5050.0	4959.2	1.499	1.052	34.684	27.819	50.417	47.47	4.307	14621.5	1540.31	0.2
5100.0	5007.7	1.502	1.049	34.685	27.820	50.629	47.56	4.331	14831.2	1541.20	0.0
5150.0	5056.3	1.506	1.047	34.686	27.821	50.840	47.70	4.354	15042.1	1542.09	0.0
5200.0	5104.8	1.509	1.043	34.686	27.821	51.051	47.86	4.378	15254.1	1542.98	0.1
5250.0	5153.4	1.512	1.040	34.687	27.822	51.262	47.97	4.402	15467.1	1543.87	0.0
5300.0	5201.9	1.516	1.037	34.686	27.822	51.471	48.22	4.426	15681.4	1544.75	-0.1
5350.0	5250.4	1.520	1.035	34.687	27.823	51.682	48.35	4.450	15896.7	1545.65	0.0
5400.0	5298.9	1.524	1.032	34.687	27.823	51.891	48.55	4.475	16113.1	1546.54	0.5
5450.0	5347.4	1.528	1.029	34.687	27.823	52.101	48.74	4.499	16330.7	1547.43	0.1
5500.0	5395.9	1.531	1.026	34.689	27.825	52.312	48.78	4.523	16549.4	1548.32	0.1
5550.0	5444.4	1.535	1.023	34.689	27.825	52.520	48.97	4.548	16769.3	1549.21	-0.1
5600.0	5492.9	1.540	1.021	34.689	27.825	52.729	49.19	4.572	16990.3	1550.11	0.1
5650.0	5541.3	1.544	1.018	34.690	27.826	52.938	49.32	4.597	17212.4	1551.00	0.8
5700.0	5589.8	1.550	1.018	34.691	27.827	53.147	49.47	4.622	17435.7	1551.91	0.0
5750.0	5638.2	1.555	1.016	34.691	27.827	53.354	49.70	4.646	17660.1	1552.81	0.0

28 JAN 81

CTD REPORT RAMA-4 STATION: 25 CAST: 1 DN
POSITION: 29DEG 14.1MIN N 152DEG 0.2MIN E DATE: 16 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
5800.0	5686.7	1.559	1.013	34.691	27.827	53.562	49.88	4.671	17885.7	1553.70	0.1
5850.0	5735.1	1.565	1.012	34.691	27.827	53.770	50.10	4.696	18112.4	1554.60	0.0
5900.0	5783.5	1.571	1.011	34.691	27.827	53.976	50.35	4.721	18340.3	1555.51	0.0
5950.0	5831.9	1.571	1.004	34.692	27.829	54.185	50.40	4.746	18569.4	1556.38	0.0

CTD REPORT RAMA-4 STATION 26 CAST 1 DN
POSITION: 28DEG 28.9MIN N 151DEG 59.4MIN E DATE 16 JUL 80

PRESS DB.	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	28.353	28.353	35.230	22.505	22.505	535.52	0.000	0.0	1542.23	
10.0	9.9	28.377	28.374	35.232	22.499	22.542	536.53	0.054	0.3	1542.44	17.1
20.0	19.8	28.356	28.351	35.276	22.540	22.624	533.14	0.107	1.1	1542.61	351.3
30.0	29.8	26.302	26.295	35.334	23.229	23.356	467.72	0.159	2.4	1538.24	582.8
40.0	39.7	24.275	24.266	35.213	23.750	23.921	418.35	0.204	4.2	1533.47	442.0
50.0	49.6	22.509	22.499	35.060	24.146	24.361	380.98	0.244	6.4	1529.04	414.1
60.0	59.5	20.848	20.836	35.063	24.609	24.868	337.18	0.281	9.0	1524.83	314.4
70.0	69.5	20.252	20.239	35.100	24.797	25.100	319.56	0.313	12.0	1523.41	154.3
80.0	79.4	19.563	19.548	35.032	24.928	25.275	307.49	0.345	15.2	1521.59	118.4
90.0	89.3	19.094	19.077	35.022	25.042	25.433	296.95	0.375	18.8	1520.43	92.2
100.0	99.2	18.703	18.685	34.990	25.118	25.553	290.06	0.405	22.7	1519.44	63.0
110.0	109.1	18.375	18.355	34.951	25.171	25.651	285.29	0.434	26.8	1518.62	38.0
120.0	119.1	18.225	18.204	34.933	25.196	25.719	283.34	0.462	31.3	1518.33	24.1
130.0	129.0	18.068	18.045	34.914	25.221	25.787	281.30	0.490	36.0	1518.01	28.0
140.0	138.9	17.848	17.823	34.884	25.252	25.864	278.57	0.518	41.0	1517.50	26.3
150.0	148.8	17.703	17.677	34.865	25.274	25.929	276.86	0.546	46.3	1517.21	27.1
160.0	158.7	17.529	17.501	34.853	25.308	26.007	273.98	0.574	51.8	1516.85	30.9
170.0	168.7	17.382	17.353	34.844	25.337	26.080	271.51	0.601	57.7	1516.57	24.5
180.0	178.6	17.367	17.336	34.866	25.358	26.145	269.89	0.628	63.8	1516.71	16.7
190.0	188.5	17.320	17.287	34.868	25.371	26.202	268.98	0.655	70.1	1516.74	13.1
200.0	198.4	17.199	17.165	34.846	25.384	26.259	268.07	0.682	76.8	1516.52	12.8
210.0	208.3	17.069	17.033	34.821	25.396	26.315	267.20	0.709	83.6	1516.26	9.1
220.0	218.2	17.038	17.001	34.818	25.402	26.365	267.02	0.735	90.8	1516.33	14.1
230.0	228.2	16.854	16.815	34.790	25.425	26.432	265.15	0.762	98.2	1515.91	20.4
240.0	238.1	16.733	16.693	34.776	25.443	26.494	263.70	0.788	105.9	1515.69	14.5
250.0	248.0	16.660	16.618	34.767	25.454	26.549	263.00	0.815	113.9	1515.63	10.8
260.0	257.9	16.591	16.548	34.759	25.464	26.603	262.31	0.841	122.1	1515.57	10.3
270.0	267.8	16.515	16.470	34.748	25.474	26.657	261.69	0.867	130.5	1515.49	9.8
280.0	277.7	16.449	16.403	34.740	25.484	26.711	261.07	0.893	139.3	1515.44	12.2
290.0	287.6	16.351	16.303	34.729	25.499	26.770	259.97	0.920	148.3	1515.30	16.5
300.0	297.6	16.274	16.225	34.729	25.517	26.833	258.53	0.945	157.5	1515.22	15.0
310.0	307.5	16.199	16.148	34.721	25.529	26.888	257.73	0.971	167.0	1515.15	17.1
320.0	317.4	16.050	15.998	34.705	25.551	26.955	255.86	0.997	176.8	1514.84	26.6
330.0	327.3	15.848	15.795	34.684	25.582	27.031	253.18	1.022	186.8	1514.35	30.7
340.0	337.2	15.667	15.613	34.670	25.612	27.106	250.49	1.048	197.0	1513.94	29.9
350.0	347.1	15.499	15.443	34.658	25.641	27.180	247.96	1.073	207.5	1513.56	29.1
360.0	357.0	15.243	15.186	34.620	25.670	27.254	245.43	1.097	218.3	1512.88	31.4
370.0	366.9	15.055	14.997	34.609	25.703	27.333	242.45	1.122	229.3	1512.44	42.8
380.0	376.8	14.724	14.666	34.581	25.755	27.431	237.67	1.146	240.5	1511.52	41.1
390.0	386.7	14.512	14.453	34.560	25.785	27.506	234.99	1.169	252.0	1510.98	26.1
400.0	396.7	14.371	14.311	34.548	25.806	27.573	233.16	1.193	263.7	1510.67	24.2
410.0	406.6	14.199	14.138	34.534	25.832	27.644	230.86	1.216	275.6	1510.27	36.5
420.0	416.5	13.908	13.846	34.513	25.878	27.736	226.63	1.239	287.8	1509.46	41.8
430.0	426.4	13.646	13.583	34.489	25.914	27.819	223.26	1.262	300.2	1508.74	29.9
440.0	436.3	13.528	13.464	34.486	25.936	27.886	221.35	1.284	312.8	1508.51	31.5
450.0	446.2	13.304	13.239	34.478	25.976	27.972	217.66	1.306	325.6	1507.92	44.7
460.0	456.1	12.896	12.831	34.432	26.023	28.067	213.13	1.328	338.6	1506.67	41.4
470.0	466.0	12.654	12.589	34.412	26.056	28.146	210.08	1.349	351.9	1506.00	35.9
480.0	475.9	12.390	12.324	34.392	26.093	28.230	206.66	1.370	365.4	1505.24	35.6
490.0	485.8	12.140	12.074	34.371	26.125	28.309	203.65	1.390	379.0	1504.53	33.2
500.0	495.7	11.957	11.890	34.367	26.157	28.387	200.69	1.411	392.9	1504.06	22.1
510.0	505.6	11.872	11.804	34.360	26.168	28.443	199.83	1.431	407.0	1503.92	22.5
520.0	515.5	11.617	11.548	34.339	26.200	28.522	196.81	1.450	421.2	1503.18	29.1
530.0	525.4	11.477	11.408	34.336	26.223	28.592	194.66	1.470	435.7	1502.85	28.3
540.0	535.3	11.237	11.167	34.318	26.254	28.670	191.78	1.490	450.3	1502.16	43.6
550.0	545.2	10.826	10.757	34.290	26.306	28.772	186.60	1.509	465.2	1500.84	53.6
560.0	555.1	10.396	10.327	34.255	26.355	28.870	181.75	1.527	480.2	1499.43	38.9
570.0	565.0	10.182	10.113	34.238	26.379	28.941	179.47	1.545	495.4	1498.81	20.6
580.0	574.9	10.053	9.983	34.228	26.393	29.002	178.18	1.563	510.8	1498.49	24.2
590.0	584.8	9.810	9.740	34.215	26.424	29.081	175.18	1.581	526.4	1497.76	24.7
600.0	594.7	9.593	9.523	34.186	26.438	29.142	173.82	1.598	542.1	1497.10	31.0
610.0	604.6	9.226	9.156	34.164	26.480	29.235	169.53	1.615	558.0	1495.89	30.6
620.0	614.5	9.092	9.022	34.154	26.494	29.295	168.25	1.632	574.1	1495.54	25.9
630.0	624.4	8.796	8.726	34.137	26.527	29.378	164.89	1.649	590.3	1494.59	32.4
640.0	634.3	8.493	8.423	34.109	26.552	29.452	162.30	1.665	606.7	1493.58	27.5
650.0	644.2	8.315	8.245	34.106	26.577	29.525	159.90	1.681	623.3	1493.07	24.2
660.0	654.1	8.103	8.033	34.090	26.596	29.592	157.95	1.697	640.0	1492.41	30.7
670.0	664.0	7.768	7.698	34.073	26.632	29.678	154.27	1.713	656.9	1491.28	28.4
680.0	673.9	7.629	7.559	34.067	26.647	29.741	152.77	1.728	673.9	1490.90	15.8
690.0	683.8	7.518	7.448	34.063	26.660	29.801	151.55	1.744	691.1	1490.63	22.1
700.0	693.7	7.246	7.176	34.051	26.689	29.879	148.59	1.759	708.4	1489.73	28.0
710.0	703.6	7.045	6.975	34.043	26.710	29.949	146.41	1.773	725.9	1489.10	26.2
720.0	713.5	6.828	6.758	34.038	26.736	30.024	143.81	1.788	743.5	1488.41	28.9
730.0	723.4	6.618	6.548	34.037	26.763	30.100	141.08	1.802	761.3	1487.75	21.8
740.0	733.3	6.446	6.376	34.023	26.774	30.160	139.84	1.816	779.2	1487.22	21.9
750.0	743.2	6.323	6.253	34.039	26.802	30.236	137.10	1.830	797.2	1486.91	22.9
760.0	753.1	6.168	6.098	34.031	26.816	30.298	135.68	1.844	815.4	1486.45	21.0
770.0	763.0	5.904	5.835	34.017	26.838	30.370	133.30	1.857	833.7	1485.54	25.1
780.0	772.9	5.872	5.802	34.043	26.862	30.440	131.07	1.870	852.1	1485.61	24.9
790.0	782.8	5.706	5.636	34.047	26.885	30.512	128.71	1.883	870.7	1485.11	23.7
800.0	792.6	5.560	5.490	34.050	26.905	30.581	126.70	1.896	889.4	1484.69	18.7
810.0	802.5	5.447	5.377	34.050	26.919	30.642	125.34	1.909	908.2	1484.39	12.8
820.0	812.4	5.367	5.296	34.049	26.927	30.698	124.49	1.921	927.1	1484.23	19.9
830.0	822.3	5.217	5.146	34.062	26.955	30.774	121.71	1.934	946.2	1483.80	22.4
840.0	832.2	5.131	5.060	34.067	26.969	30.835	120.37	1.946	965.4	1483.62	13.2
850.0	842.1	5.075	5.003	34.072	26.979	30.892	119.39	1.958	984.7	1483.56	13.3
860.0	852.0	4.993	4.921	34.078	26.993	30.954	118.03	1.970	1004.1	1483.40	12.5
870.0	861.9	4.949	4.876	34.083	27.002	31.009	117.21	1.981	1023.7	1483.39	13.5
880.0	871.8	4.869	4.796	34.092	27.018	31.072	115.64	1.993	1043.3	1483.24	21.7
890.0	881.6	4.747	4.674	34.106	27.043	31.145	113.20	2.005	1063.1	1482.91	19.6
900.0	891.5	4.688	4.615	34.113	27.055	31.204	112.03	2.016	1082.9	1482.84	10.8
910.0	901.4	4.651	4.577	34.118	27.063	31.259	111.32	2.027	1102.9	1482.86	14.3
920.0	911.3	4.561	4.487	34.129	27.081	31.325	109.51	2.038	1123.0	1482.67	15.3
930.0	921.2	4.481	4.406	34.130	27.090	31.382	108.54	2.049	1143.2	1482.50	13.9
940.0	931.1	4.407	4.332	34.140	27.106	31.445	106.99	2.060	1163.5	1482.37	14.2
950.0	941.0	4.370	4.294	34.149	27.117	31.502	105.98	2.070	1183.9	1482.39	12.4
960.0	950.9	4.320	4.244	34.158	27.130	31.562	104.78	2.081	1204.5	1482.36	14.2
970.0	960.7	4.261	4.185	34.168	27.144	31.623	103.43	2.091	1225.1	1482.29	14.5

28 JAN 81

CTD REPORT RAMA-4 STATION: 26 CAST: 1 DN
POSITION: 28DEG 28.9MIN N 151DEG 59.4MIN E DATE: 16 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	4.212	4.135	34.178	27.157	31.683	102.19	2.102	1245.8	1482.26	18.0
990.0	980.5	4.168	4.090	34.200	27.179	31.751	100.12	2.112	1266.6	1482.27	19.2
1000.0	990.4	4.094	4.016	34.209	27.193	31.813	98.66	2.122	1287.5	1482.14	13.0
1050.0	1039.8	3.899	3.819	34.252	27.247	32.100	93.59	2.170	1393.6	1482.19	11.8
1100.0	1089.2	3.685	3.602	34.293	27.301	32.388	88.43	2.216	1501.9	1482.16	9.5
1150.0	1138.6	3.579	3.493	34.311	27.326	32.644	86.25	2.259	1612.4	1482.56	6.3
1200.0	1188.0	3.365	3.277	34.353	27.380	32.932	81.01	2.301	1725.0	1482.53	9.9
1250.0	1237.3	3.282	3.190	34.373	27.403	33.187	78.92	2.341	1839.6	1483.02	6.3
1300.0	1286.7	3.148	3.053	34.392	27.431	33.446	76.29	2.380	1956.1	1483.30	7.4
1350.0	1336.0	2.994	2.897	34.418	27.466	33.714	72.92	2.417	2074.5	1483.50	6.2
1400.0	1385.4	2.876	2.776	34.440	27.494	33.974	70.24	2.453	2194.7	1483.84	6.9
1450.0	1434.7	2.768	2.665	34.457	27.517	34.228	68.06	2.488	2316.5	1484.23	5.0
1500.0	1484.0	2.694	2.588	34.469	27.533	34.475	66.59	2.521	2440.0	1484.75	3.5
1550.0	1533.3	2.615	2.506	34.483	27.551	34.723	64.91	2.554	2565.2	1485.25	3.9
1600.0	1582.6	2.524	2.412	34.495	27.568	34.971	63.24	2.586	2691.9	1485.70	3.3
1650.0	1631.9	2.445	2.330	34.509	27.586	35.219	61.56	2.618	2820.1	1486.21	4.7
1700.0	1681.2	2.364	2.246	34.524	27.605	35.468	59.75	2.648	2949.8	1486.70	2.9
1750.0	1730.5	2.294	2.172	34.533	27.618	35.711	58.52	2.678	3081.0	1487.24	3.6
1800.0	1779.7	2.247	2.122	34.542	27.629	35.951	57.54	2.707	3213.6	1487.88	2.4
1850.0	1829.0	2.190	2.061	34.552	27.642	36.192	56.34	2.735	3347.6	1488.48	4.3
1900.0	1878.2	2.132	2.000	34.565	27.657	36.436	54.93	2.763	3483.0	1489.07	3.1
1950.0	1927.4	2.074	1.939	34.573	27.668	36.676	53.87	2.790	3619.6	1489.66	1.7
2000.0	1976.6	2.037	1.898	34.579	27.676	36.912	53.19	2.817	3757.6	1490.34	3.0
2050.0	2025.8	1.985	1.843	34.587	27.686	37.150	52.18	2.843	3896.9	1490.96	1.7
2100.0	2075.0	1.958	1.812	34.591	27.692	37.382	51.77	2.869	4037.4	1491.68	1.6
2150.0	2124.2	1.930	1.780	34.596	27.698	37.615	51.26	2.895	4179.1	1492.40	1.3
2200.0	2173.4	1.893	1.739	34.602	27.706	37.850	50.54	2.921	4322.1	1493.09	1.6
2250.0	2222.6	1.866	1.708	34.606	27.711	38.081	50.12	2.946	4466.3	1493.81	1.0
2300.0	2271.7	1.843	1.681	34.610	27.717	38.312	49.72	2.971	4611.7	1494.56	1.5
2350.0	2320.9	1.808	1.643	34.613	27.722	38.544	49.25	2.995	4758.3	1495.25	1.7
2400.0	2370.0	1.788	1.618	34.617	27.727	38.774	48.89	3.020	4906.1	1496.01	1.9
2450.0	2419.1	1.753	1.580	34.622	27.734	39.006	48.24	3.044	5055.0	1496.70	1.3
2500.0	2468.2	1.732	1.554	34.626	27.739	39.236	47.85	3.068	5205.1	1497.46	1.0
2550.0	2517.3	1.712	1.530	34.629	27.743	39.465	47.54	3.092	5356.3	1498.21	0.8
2600.0	2566.4	1.693	1.507	34.632	27.747	39.693	47.24	3.116	5508.7	1498.98	1.3
2650.0	2615.5	1.674	1.484	34.636	27.752	39.922	46.87	3.139	5662.2	1499.75	0.7
2700.0	2664.6	1.660	1.466	34.638	27.754	40.148	46.69	3.163	5816.8	1500.53	1.4
2750.0	2713.6	1.645	1.446	34.640	27.757	40.374	46.52	3.186	5972.5	1501.31	0.8
2800.0	2762.7	1.634	1.431	34.642	27.760	40.600	46.38	3.209	6129.3	1502.12	1.2
2850.0	2811.7	1.623	1.415	34.645	27.764	40.826	46.17	3.232	6287.3	1502.92	0.9
2900.0	2860.7	1.608	1.396	34.647	27.767	41.052	45.98	3.255	6446.3	1503.70	0.9
2950.0	2909.7	1.594	1.377	34.649	27.769	41.277	45.79	3.278	6606.4	1504.49	0.8
3000.0	2958.8	1.581	1.360	34.652	27.773	41.503	45.54	3.301	6767.7	1505.29	1.4
3050.0	3007.8	1.572	1.346	34.654	27.776	41.727	45.43	3.324	6929.9	1506.10	0.3
3100.0	3056.7	1.563	1.332	34.655	27.777	41.950	45.37	3.347	7093.3	1506.92	0.6
3150.0	3105.7	1.550	1.315	34.657	27.780	42.174	45.19	3.369	7257.8	1507.71	0.7
3200.0	3154.7	1.545	1.305	34.658	27.782	42.396	45.19	3.392	7423.3	1508.54	0.4
3250.0	3203.6	1.537	1.292	34.659	27.783	42.618	45.14	3.414	7589.9	1509.36	1.2
3300.0	3252.6	1.528	1.278	34.661	27.786	42.841	45.01	3.437	7757.6	1510.18	0.3
3350.0	3301.5	1.520	1.266	34.662	27.787	43.063	44.97	3.459	7926.3	1511.00	0.6
3400.0	3350.4	1.514	1.255	34.663	27.789	43.284	44.95	3.482	8096.1	1511.83	0.3
3450.0	3399.4	1.512	1.247	34.665	27.791	43.505	44.92	3.504	8266.9	1512.68	0.6
3500.0	3448.3	1.508	1.238	34.665	27.792	43.725	45.00	3.527	8438.8	1513.52	0.8
3550.0	3497.2	1.502	1.227	34.667	27.794	43.947	44.89	3.549	8611.8	1514.35	0.1
3600.0	3546.0	1.500	1.220	34.668	27.795	44.166	44.93	3.572	8785.8	1515.20	0.2
3650.0	3594.9	1.496	1.211	34.668	27.796	44.385	45.00	3.594	8960.9	1516.04	0.7
3700.0	3643.8	1.492	1.202	34.669	27.797	44.605	45.00	3.617	9137.1	1516.89	-0.7
3750.0	3692.6	1.486	1.191	34.670	27.799	44.824	44.97	3.639	9314.3	1517.72	-0.1
3800.0	3741.5	1.482	1.181	34.671	27.800	45.043	44.97	3.662	9492.6	1518.56	0.6
3850.0	3790.3	1.479	1.173	34.672	27.802	45.262	44.99	3.684	9671.9	1519.41	0.3
3900.0	3839.1	1.475	1.164	34.673	27.803	45.481	44.98	3.707	9852.3	1520.26	0.8
3950.0	3887.9	1.473	1.156	34.674	27.804	45.699	45.01	3.729	10033.8	1521.11	0.2
4000.0	3936.7	1.472	1.150	34.675	27.806	45.917	45.06	3.752	10216.3	1521.97	0.7
4050.0	3985.5	1.470	1.142	34.675	27.806	46.133	45.14	3.774	10399.9	1522.82	0.3
4100.0	4034.3	1.471	1.138	34.676	27.807	46.350	45.22	3.797	10584.5	1523.69	0.1
4150.0	4083.1	1.473	1.134	34.675	27.807	46.565	45.44	3.819	10770.2	1524.56	0.8
4200.0	4131.8	1.472	1.127	34.677	27.809	46.783	45.42	3.842	10957.0	1525.43	0.1
4250.0	4180.6	1.473	1.123	34.677	27.809	46.998	45.56	3.865	11144.8	1526.29	0.1
4300.0	4229.3	1.471	1.115	34.678	27.810	47.215	45.57	3.888	11333.7	1527.15	0.4
4350.0	4278.0	1.472	1.110	34.678	27.811	47.429	45.73	3.910	11523.7	1528.02	0.1
4400.0	4326.8	1.472	1.105	34.679	27.812	47.645	45.76	3.933	11714.7	1528.89	0.0
4450.0	4375.5	1.474	1.101	34.679	27.812	47.860	45.93	3.956	11906.8	1529.77	0.5
4500.0	4424.2	1.474	1.095	34.680	27.813	48.075	45.98	3.979	12100.0	1530.63	0.3
4550.0	4472.9	1.476	1.091	34.681	27.814	48.289	46.06	4.002	12294.3	1531.51	0.5
4600.0	4521.5	1.477	1.086	34.681	27.815	48.503	46.21	4.025	12489.6	1532.38	0.5
4650.0	4570.2	1.479	1.082	34.682	27.816	48.717	46.29	4.048	12686.1	1533.26	-0.5
4700.0	4618.8	1.483	1.080	34.682	27.816	48.930	46.48	4.072	12883.6	1534.15	-0.3
4750.0	4667.5	1.483	1.074	34.682	27.816	49.143	46.60	4.095	13082.2	1535.02	-0.2
4800.0	4716.1	1.486	1.071	34.683	27.817	49.356	46.72	4.118	13281.9	1535.90	0.0
4850.0	4764.8	1.489	1.067	34.682	27.817	49.568	46.96	4.142	13482.7	1536.78	0.1
4900.0	4813.4	1.489	1.061	34.683	27.818	49.782	46.99	4.165	13684.6	1537.66	0.1
4950.0	4862.0	1.490	1.056	34.683	27.818	49.994	47.14	4.189	13887.6	1538.53	0.1
5000.0	4910.6	1.493	1.053	34.685	27.820	50.207	47.17	4.212	14091.7	1539.42	0.6
5050.0	4959.2	1.494	1.048	34.685	27.820	50.419	47.30	4.236	14296.9	1540.29	-0.3
5100.0	5007.7	1.498	1.045	34.685	27.820	50.629	47.49	4.260	14503.2	1541.18	0.7
5150.0	5056.3	1.499	1.040	34.685	27.821	50.841	47.64	4.283	14710.6	1542.06	-0.3
5200.0	5104.8	1.503	1.037	34.685	27.821	51.051	47.84	4.307	14919.1	1542.95	0.1
5250.0	5153.4	1.505	1.033	34.685	27.821	51.262	47.98	4.331	15128.8	1543.83	0.6
5300.0	5201.9	1.508	1.029	34.685	27.821	51.472	48.15	4.355	15339.5	1544.72	0.1
5350.0	5250.4	1.512	1.027	34.687	27.823	51.683	48.21	4.379	15551.4	1545.61	0.0
5400.0	5298.9	1.517	1.025	34.686	27.822	51.892	48.48	4.403	15764.4	1546.51	0.4
5450.0	5347.4	1.522	1.024	34.687	27.823	52.102	48.63	4.428	15978.5	1547.41	0.6
5500.0	5395.9	1.524	1.019	34.687	27.824	52.311	48.79	4.452	16193.8	1548.29	1.3
5550.0	5444.4	1.527	1.015	34.690	27.826	52.523	48.76	4.476	16410.2	1549.18	0.3
5600.0	5492.9	1.534	1.015	34.689	27.826	52.730	49.07	4.501	16627.7	1550.09	0.1
5650.0	5541.3	1.540	1.015	34.688	27.825	52.938	49.36	4.525	16846.4	1550.99	0.1
5700.0	5589.8	1.546	1.014	34.689	27.826	53.146	49.52	4.550	17066.2	1551.89	0.4
5750.0	5638.2	1.552	1.013	34.690	27.827	53.354	49.70	4.575	17287.1	1552.79	0.0

CTD REPORT RAMA-4 STATION: 26 CAST: 1 DN
POSITION: 28DEG 28.9MIN N 151DEG 59.4MIN E DATE: 16 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
5800.0	5686.7	1.558	1.012	34.690	27.827	53.562	49.92	4.600	17509.3	1553.69	0.1
5850.0	5735.1	1.564	1.011	34.690	27.827	53.769	50.16	4.625	17732.5	1554.60	0.0
5900.0	5783.5	1.570	1.010	34.690	27.827	53.976	50.39	4.650	17957.0	1555.50	0.4
5950.0	5831.9	1.576	1.009	34.691	27.828	54.183	50.57	4.675	18182.6	1556.40	0.0

CTD REPORT RAMA-4 STATION 27 CAST 2 DN
POSITION: 27DEG 59.5MIN N 151DEG 56.3MIN E DATE 17 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	28.808	28.808	35.241	22.367	22.367	548.70	0.000	0.0	1543.22	
10.0	9.9	28.783	28.780	35.275	22.401	22.443	545.91	0.055	0.3	1543.36	39.0
20.0	19.8	28.642	28.637	35.275	22.448	22.532	541.99	0.109	1.1	1543.22	257.9
30.0	29.8	27.012	27.005	35.238	22.937	23.064	495.66	0.161	2.4	1539.76	357.8
40.0	39.7	26.082	26.072	35.192	23.191	23.360	471.85	0.210	4.3	1537.75	413.1
50.0	49.6	23.743	23.732	35.063	23.794	24.008	414.63	0.254	6.6	1532.16	389.1
60.0	59.5	23.030	23.017	35.059	23.997	24.255	395.60	0.295	9.3	1530.53	216.3
70.0	69.5	22.261	22.246	35.093	24.242	24.543	372.66	0.333	12.4	1528.76	222.9
80.0	79.4	21.177	21.161	34.982	24.459	24.804	352.31	0.370	15.9	1525.95	166.3
90.0	89.3	20.683	20.665	34.972	24.586	24.975	340.57	0.404	19.8	1524.77	105.5
100.0	99.2	20.320	20.301	34.963	24.677	25.109	332.27	0.438	23.9	1523.94	90.9
110.0	109.1	20.126	20.105	35.022	24.773	25.250	323.41	0.471	28.4	1523.63	94.0
120.0	119.1	19.768	19.745	35.025	24.871	25.391	314.52	0.503	33.3	1522.81	106.6
130.0	129.0	19.073	19.049	34.948	24.993	25.558	303.15	0.534	38.4	1520.94	103.6
140.0	138.9	18.668	18.643	34.931	25.084	25.693	294.82	0.564	43.8	1519.93	77.7
150.0	148.8	18.369	18.342	34.922	25.152	25.806	288.58	0.593	49.6	1519.22	59.0
160.0	158.7	18.129	18.101	34.911	25.204	25.902	283.96	0.621	55.6	1518.68	37.6
170.0	168.7	17.828	17.798	34.845	25.229	25.971	281.91	0.650	61.9	1517.89	34.7
180.0	178.6	17.679	17.648	34.857	25.275	26.061	277.85	0.678	68.5	1517.63	41.4
190.0	188.5	17.454	17.421	34.835	25.314	26.144	274.49	0.705	75.3	1517.10	33.8
200.0	198.4	17.215	17.181	34.798	25.343	26.218	271.93	0.733	82.5	1516.51	30.6
210.0	208.3	16.966	16.930	34.761	25.375	26.294	269.19	0.760	89.9	1515.89	24.8
220.0	218.2	16.847	16.810	34.747	25.393	26.357	267.78	0.787	97.6	1515.68	22.8
230.0	228.2	16.672	16.634	34.729	25.421	26.429	265.41	0.813	105.5	1515.29	24.0
240.0	238.1	16.574	16.534	34.725	25.442	26.494	263.76	0.840	113.7	1515.15	25.3
250.0	248.0	16.396	16.355	34.710	25.472	26.568	261.15	0.866	122.1	1514.76	29.6
260.0	257.9	16.254	16.211	34.705	25.502	26.642	258.61	0.892	130.9	1514.48	27.1
270.0	267.8	16.107	16.063	34.693	25.527	26.712	256.49	0.918	139.8	1514.18	24.5
280.0	277.7	15.961	15.916	34.680	25.551	26.781	254.48	0.944	149.1	1513.88	25.1
290.0	287.6	15.814	15.767	34.670	25.577	26.852	252.25	0.969	158.5	1513.58	28.0
300.0	297.6	15.633	15.585	34.655	25.607	26.926	249.65	0.994	168.3	1513.16	24.8
310.0	307.5	15.516	15.467	34.646	25.627	26.991	248.03	1.019	178.2	1512.95	19.3
320.0	317.4	15.407	15.356	34.638	25.646	27.054	246.52	1.044	188.5	1512.76	23.0
330.0	327.3	15.246	15.194	34.626	25.673	27.126	244.19	1.068	198.9	1512.41	34.7
340.0	337.2	14.991	14.938	34.607	25.715	27.213	240.36	1.093	209.6	1511.74	32.7
350.0	347.1	14.839	14.785	34.593	25.738	27.281	238.41	1.117	220.6	1511.41	23.9
360.0	357.0	14.676	14.621	34.578	25.762	27.351	236.31	1.140	231.8	1511.03	30.1
370.0	366.9	14.443	14.387	34.558	25.797	27.431	233.11	1.164	243.2	1510.43	22.2
380.0	376.8	14.387	14.330	34.553	25.806	27.484	232.59	1.187	254.8	1510.40	24.3
390.0	386.7	14.152	14.094	34.539	25.845	27.570	228.97	1.210	266.7	1509.79	45.5
400.0	396.7	13.812	13.753	34.511	25.896	27.667	224.26	1.233	278.8	1508.81	36.4
410.0	406.6	13.688	13.628	34.505	25.917	27.733	222.42	1.255	291.1	1508.57	24.1
420.0	416.5	13.511	13.450	34.491	25.943	27.805	220.11	1.277	303.7	1508.13	34.2
430.0	426.4	13.262	13.200	34.478	25.984	27.892	216.29	1.299	316.5	1507.45	32.3
440.0	436.3	13.100	13.037	34.464	26.007	27.960	214.35	1.321	329.4	1507.06	18.1
450.0	446.2	13.004	12.940	34.455	26.019	28.018	213.34	1.342	342.6	1506.90	24.0
460.0	456.1	12.755	12.691	34.434	26.053	28.098	210.21	1.363	356.0	1506.20	34.8
470.0	466.0	12.526	12.461	34.419	26.087	28.178	207.08	1.384	369.6	1505.57	32.7
480.0	475.9	12.304	12.238	34.401	26.116	28.254	204.35	1.405	383.5	1504.96	28.4
490.0	485.8	12.118	12.052	34.387	26.141	28.326	202.06	1.425	397.5	1504.47	33.2
500.0	495.7	11.820	11.753	34.363	26.180	28.411	198.40	1.445	411.7	1503.58	44.9
510.0	505.6	11.430	11.364	34.330	26.227	28.508	193.76	1.465	426.1	1502.36	28.5
520.0	515.5	11.377	11.309	34.326	26.234	28.559	193.32	1.484	440.7	1502.33	7.3
530.0	525.4	11.328	11.259	34.323	26.241	28.611	192.86	1.504	455.5	1502.32	31.7
540.0	535.3	10.928	10.860	34.298	26.294	28.714	187.62	1.523	470.5	1501.05	45.1
550.0	545.2	10.654	10.585	34.277	26.327	28.794	184.49	1.541	485.7	1500.21	30.9
560.0	555.1	10.418	10.349	34.256	26.352	28.867	182.06	1.560	501.0	1499.51	20.4
570.0	565.0	10.320	10.250	34.250	26.364	28.925	180.98	1.578	516.5	1499.32	22.0
580.0	574.9	10.059	9.989	34.229	26.393	29.002	178.21	1.596	532.2	1498.52	35.8
590.0	584.8	9.713	9.643	34.203	26.431	29.089	174.42	1.614	548.1	1497.39	35.4
600.0	594.7	9.471	9.401	34.187	26.458	29.165	171.71	1.631	564.2	1496.65	32.0
610.0	604.6	9.173	9.103	34.165	26.489	29.245	168.57	1.648	580.4	1495.69	32.7
620.0	614.5	8.910	8.840	34.148	26.518	29.322	165.74	1.665	596.8	1494.86	27.9
630.0	624.4	8.692	8.622	34.133	26.540	29.392	163.52	1.681	613.4	1494.19	31.2
640.0	634.3	8.405	8.336	34.121	26.575	29.476	160.04	1.698	630.1	1493.26	28.8
650.0	644.2	8.191	8.121	34.102	26.593	29.542	158.26	1.713	647.0	1492.60	20.5
660.0	654.1	8.036	7.966	34.097	26.612	29.609	156.40	1.729	664.0	1492.17	33.3
670.0	664.0	7.696	7.627	34.087	26.653	29.701	152.15	1.745	681.2	1491.02	30.6
680.0	673.9	7.486	7.417	34.065	26.666	29.762	150.79	1.760	698.6	1490.35	26.1
690.0	683.8	7.209	7.140	34.058	26.699	29.845	147.38	1.775	716.1	1489.43	30.9
700.0	693.7	7.028	6.959	34.056	26.723	29.917	145.07	1.789	733.7	1488.89	23.7
710.0	703.6	6.870	6.801	34.054	26.742	29.985	143.10	1.804	751.5	1488.43	15.2
720.0	713.5	6.814	6.744	34.054	26.750	30.038	142.44	1.818	769.4	1488.38	19.2
730.0	723.4	6.559	6.490	34.045	26.777	30.115	139.67	1.832	787.4	1487.53	28.5
740.0	733.3	6.364	6.295	34.044	26.801	30.188	137.16	1.846	805.6	1486.92	18.3
750.0	743.2	6.303	6.233	34.045	26.810	30.243	136.39	1.860	824.0	1486.84	18.4
760.0	753.1	6.115	6.045	34.046	26.834	30.317	133.87	1.873	842.4	1486.26	27.1
770.0	763.0	5.921	5.851	34.046	26.858	30.390	131.39	1.887	861.0	1485.65	23.7
780.0	772.9	5.766	5.696	34.045	26.877	30.457	129.52	1.900	879.8	1485.19	18.*
790.0	782.8	5.696	5.626	34.053	26.891	30.518	128.13	1.913	898.6	1485.08	20.3
800.0	792.6	5.574	5.504	34.064	26.915	30.590	125.84	1.925	917.6	1484.76	18.5
810.0	802.5	5.483	5.412	34.064	26.926	30.648	124.78	1.938	936.7	1484.56	15.6
820.0	812.4	5.376	5.305	34.070	26.943	30.713	123.05	1.950	955.9	1484.30	19.3
830.0	822.3	5.270	5.199	34.077	26.961	30.778	121.28	1.962	975.3	1484.04	21.7
840.0	832.2	5.139	5.068	34.086	26.983	30.849	119.07	1.975	994.7	1483.68	23.5
850.0	842.1	5.045	4.974	34.100	27.005	30.918	116.94	1.986	1014.3	1483.48	18.2
860.0	852.0	4.976	4.904	34.106	27.017	30.978	115.75	1.998	1034.0	1483.36	16.6
870.0	861.9	4.876	4.804	34.115	27.035	31.044	113.94	2.009	1053.8	1483.13	13.4
880.0	871.8	4.842	4.769	34.118	27.042	31.096	113.39	2.021	1073.8	1483.16	11.9
890.0	881.6	4.777	4.704	34.129	27.058	31.159	111.87	2.032	1093.8	1483.07	19.6
900.0	891.5	4.679	4.606	34.142	27.079	31.228	109.79	2.043	1114.0	1482.84	20.8
910.0	901.4	4.569	4.495	34.149	27.096	31.294	108.03	2.054	1134.2	1482.56	19.4
920.0	911.3	4.494	4.420	34.162	27.114	31.359	106.24	2.065	1154.6	1482.43	18.6
930.0	921.2	4.408	4.334	34.171	27.131	31.423	104.63	2.075	1175.0	1482.25	16.6
940.0	931.1	4.339	4.264	34.180	27.145	31.485	103.21	2.086	1195.6	1482.14	14.7
950.0	941.0	4.290	4.215	34.190	27.158	31.545	101.97	2.096	1216.3	1482.11	12.2
960.0	950.9	4.261	4.185	34.199	27.168	31.601	101.04	2.106	1237.1	1482.17	5.8
970.0	960.7	4.246	4.170	34.203	27.173	31.652	100.67	2.116	1257.9	1482.27	10.3

CTD REPORT RAMA-4 STATION: 27 CAST: 2 DN
POSITION 27DEG 59.5MIN N 151DEG 56.3MIN E DATE: 17 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	4.194	4.117	34.215	27.188	31.714	99.24	2.126	1278.9	1482.23	15.0
990.0	980.5	4.152	4.075	34.227	27.202	31.774	97.94	2.136	1300.0	1482.24	12.7
1000.0	990.4	4.107	4.029	34.234	27.212	31.831	96.96	2.146	1321.1	1482.22	15.4
1050.0	1039.8	3.847	3.767	34.289	27.282	32.136	90.24	2.193	1428.3	1482.02	8.1
1100.0	1089.2	3.632	3.550	34.308	27.318	32.407	86.70	2.237	1537.7	1481.96	7.6
1150.0	1138.6	3.493	3.408	34.340	27.357	32.678	83.10	2.280	1649.3	1482.23	8.7
1200.0	1188.0	3.340	3.252	34.366	27.392	32.946	79.76	2.320	1762.9	1482.44	9.0
1250.0	1237.3	3.195	3.104	34.392	27.426	33.212	76.51	2.359	1878.4	1482.68	6.2
1300.0	1286.7	3.048	2.954	34.416	27.459	33.478	73.37	2.397	1995.8	1482.90	6.1
1350.0	1336.0	2.951	2.854	34.438	27.485	33.735	70.95	2.433	2114.9	1483.34	3.5
1400.0	1385.4	2.899	2.799	34.450	27.500	33.979	69.77	2.468	2235.9	1483.96	4.6
1450.0	1434.7	2.801	2.698	34.464	27.520	34.230	67.91	2.503	2358.5	1484.38	4.3
1500.0	1484.0	2.670	2.564	34.481	27.544	34.487	65.43	2.536	2482.7	1484.66	4.7
1550.0	1533.3	2.561	2.452	34.492	27.562	34.737	63.63	2.568	2608.5	1485.03	3.9
1600.0	1582.6	2.480	2.368	34.505	27.580	34.985	62.00	2.600	2735.9	1485.52	4.7
1650.0	1631.9	2.387	2.272	34.523	27.602	35.238	59.85	2.630	2864.8	1485.97	2.9
1700.0	1681.2	2.348	2.230	34.531	27.612	35.476	59.04	2.660	2995.1	1486.64	2.8
1750.0	1730.5	2.287	2.165	34.543	27.626	35.720	57.70	2.689	3126.9	1487.22	4.6
1800.0	1779.7	2.231	2.106	34.553	27.639	35.961	56.54	2.718	3260.0	1487.82	1.8
1850.0	1829.0	2.177	2.049	34.562	27.651	36.202	55.47	2.746	3394.6	1488.43	3.4
1900.0	1878.2	2.127	1.995	34.570	27.661	36.441	54.50	2.773	3530.4	1489.06	3.2
1950.0	1927.4	2.077	1.942	34.578	27.672	36.680	53.55	2.800	3667.6	1489.68	2.1
2000.0	1976.6	2.024	1.885	34.584	27.681	36.917	52.68	2.827	3806.0	1490.29	2.7
2050.0	2025.8	2.004	1.861	34.590	27.687	37.150	52.19	2.853	3945.8	1491.05	1.3
2100.0	2075.0	1.969	1.823	34.595	27.694	37.384	51.61	2.879	4086.7	1491.74	2.4
2150.0	2124.2	1.924	1.774	34.600	27.702	37.619	50.89	2.905	4229.0	1492.38	1.0
2200.0	2173.4	1.907	1.753	34.606	27.708	37.851	50.43	2.930	4372.4	1493.15	2.7
2250.0	2222.6	1.867	1.709	34.609	27.714	38.084	49.90	2.955	4517.0	1493.82	1.3
2300.0	2271.7	1.839	1.677	34.612	27.719	38.314	49.52	2.980	4662.9	1494.54	1.5
2350.0	2320.9	1.810	1.644	34.618	27.726	38.547	48.90	3.004	4809.9	1495.26	1.2
2400.0	2370.0	1.786	1.616	34.621	27.730	38.777	48.57	3.029	4958.1	1496.00	1.6
2450.0	2419.1	1.768	1.594	34.627	27.737	39.008	48.07	3.053	5107.5	1496.77	0.8
2500.0	2468.2	1.760	1.582	34.629	27.739	39.235	47.99	3.077	5258.0	1497.58	1.3
2550.0	2517.3	1.722	1.540	34.630	27.743	39.464	47.59	3.101	5409.6	1498.26	1.2
2600.0	2566.4	1.702	1.516	34.635	27.749	39.694	47.15	3.124	5562.4	1499.02	1.8
2650.0	2615.5	1.685	1.495	34.636	27.751	39.920	47.02	3.148	5716.3	1499.79	0.9
2700.0	2664.6	1.671	1.476	34.640	27.755	40.148	46.69	3.171	5871.4	1500.58	1.3
2750.0	2713.6	1.653	1.454	34.642	27.758	40.375	46.48	3.195	6027.5	1501.35	1.0
2800.0	2762.7	1.638	1.435	34.645	27.762	40.602	46.23	3.218	6184.8	1502.14	0.8
2850.0	2811.7	1.620	1.412	34.648	27.766	40.829	45.92	3.241	6343.1	1502.91	0.4
2900.0	2860.7	1.613	1.401	34.649	27.768	41.052	45.90	3.264	6502.6	1503.73	0.0
2950.0	2909.7	1.603	1.386	34.652	27.771	41.278	45.70	3.287	6663.1	1504.54	0.9
3000.0	2958.8	1.589	1.368	34.654	27.774	41.503	45.51	3.310	6824.7	1505.33	0.2
3050.0	3007.8	1.578	1.352	34.656	27.777	41.727	45.36	3.332	6987.5	1506.13	0.6
3100.0	3056.7	1.569	1.338	34.657	27.778	41.950	45.31	3.355	7151.2	1506.94	0.9
3150.0	3105.7	1.557	1.322	34.659	27.781	42.174	45.14	3.378	7316.1	1507.75	0.3
3200.0	3154.7	1.552	1.312	34.659	27.782	42.396	45.22	3.400	7482.0	1508.58	0.3
3250.0	3203.6	1.547	1.302	34.661	27.784	42.618	45.14	3.423	7649.0	1509.41	0.6
3300.0	3252.6	1.538	1.288	34.662	27.786	42.840	45.10	3.445	7817.1	1510.23	0.6
3350.0	3301.5	1.532	1.277	34.663	27.787	43.062	45.07	3.468	7986.2	1511.06	0.8
3400.0	3350.4	1.526	1.266	34.666	27.791	43.285	44.91	3.490	8156.4	1511.89	0.7
3450.0	3399.4	1.518	1.253	34.667	27.792	43.506	44.86	3.513	8327.7	1512.71	0.4
3500.0	3448.3	1.512	1.242	34.668	27.794	43.727	44.85	3.535	8500.0	1513.54	1.0
3550.0	3497.2	1.506	1.231	34.669	27.795	43.947	44.82	3.558	8673.4	1514.37	0.6
3600.0	3546.0	1.503	1.223	34.670	27.797	44.167	44.83	3.580	8847.8	1515.22	0.0
3650.0	3594.9	1.498	1.213	34.671	27.798	44.387	44.82	3.602	9023.3	1516.06	-0.1
3700.0	3643.8	1.495	1.205	34.672	27.800	44.607	44.83	3.625	9199.9	1516.90	-0.1
3750.0	3692.6	1.491	1.195	34.672	27.800	44.825	44.92	3.647	9377.5	1517.74	0.7
3800.0	3741.5	1.487	1.186	34.673	27.802	45.044	44.91	3.670	9556.2	1518.59	0.1
3850.0	3790.3	1.485	1.179	34.674	27.803	45.263	44.93	3.692	9735.9	1519.44	0.4
3900.0	3839.1	1.483	1.171	34.675	27.804	45.481	44.97	3.715	9916.7	1520.29	0.6
3950.0	3887.9	1.477	1.160	34.676	27.806	45.700	44.93	3.737	10098.5	1521.13	0.6
4000.0	3936.7	1.479	1.157	34.677	27.807	45.917	45.03	3.760	10281.4	1522.00	0.2
4050.0	3985.5	1.478	1.150	34.677	27.807	46.134	45.12	3.782	10465.4	1522.86	0.3
4100.0	4034.3	1.476	1.143	34.678	27.808	46.351	45.16	3.805	10650.4	1523.72	0.2
4150.0	4083.1	1.477	1.138	34.678	27.809	46.567	45.31	3.827	10836.5	1524.58	0.1
4200.0	4131.8	1.477	1.132	34.679	27.810	46.783	45.36	3.850	11023.6	1525.45	0.2
4250.0	4180.6	1.477	1.127	34.678	27.809	46.998	45.55	3.873	11211.8	1526.31	-0.3
4300.0	4229.3	1.473	1.117	34.680	27.812	47.216	45.47	3.895	11401.1	1527.16	-0.4
4350.0	4278.0	1.472	1.110	34.681	27.813	47.432	45.51	3.918	11591.5	1528.03	0.3
4400.0	4326.8	1.475	1.107	34.681	27.813	47.646	45.68	3.941	11782.9	1528.91	0.2
4450.0	4375.5	1.479	1.105	34.681	27.813	47.860	45.88	3.964	11975.4	1529.79	0.4
4500.0	4424.2	1.478	1.099	34.682	27.815	48.075	45.92	3.987	12168.9	1530.65	0.2
4550.0	4472.9	1.478	1.093	34.683	27.816	48.290	45.96	4.010	12363.6	1531.52	0.3
4600.0	4521.5	1.479	1.088	34.683	27.816	48.504	46.11	4.033	12559.3	1532.39	0.1
4650.0	4570.2	1.482	1.085	34.684	27.817	48.718	46.21	4.056	12756.1	1533.28	0.2
4700.0	4618.8	1.485	1.082	34.684	27.817	48.931	46.37	4.079	12954.0	1534.16	-0.0
4750.0	4667.5	1.487	1.078	34.684	27.818	49.144	46.53	4.102	13152.9	1535.04	-0.3
4800.0	4716.1	1.489	1.073	34.684	27.818	49.357	46.69	4.125	13353.0	1535.92	0.4
4850.0	4764.8	1.491	1.069	34.684	27.818	49.569	46.84	4.149	13554.1	1536.79	0.4
4900.0	4813.4	1.493	1.065	34.685	27.819	49.782	46.93	4.172	13756.4	1537.68	0.5
4950.0	4862.0	1.495	1.061	34.685	27.819	49.994	47.09	4.196	13959.7	1538.55	0.1
5000.0	4910.6	1.497	1.057	34.685	27.820	50.206	47.23	4.219	14164.2	1539.43	0.1
5050.0	4959.2	1.500	1.053	34.686	27.821	50.418	47.34	4.243	14369.7	1540.32	0.1
5100.0	5007.7	1.502	1.049	34.687	27.822	50.630	47.42	4.267	14576.3	1541.20	0.1
5150.0	5056.3	1.506	1.047	34.687	27.822	50.841	47.61	4.290	14784.1	1542.09	0.0
5200.0	5104.8	1.509	1.043	34.687	27.822	51.052	47.79	4.314	14992.9	1542.98	0.0
5250.0	5153.4	1.510	1.038	34.687	27.822	51.262	47.93	4.338	15202.9	1543.86	0.1
5300.0	5201.9	1.512	1.033	34.688	27.824	51.474	48.02	4.362	15414.0	1544.74	-0.5
5350.0	5250.4	1.516	1.031	34.688	27.824	51.683	48.22	4.386	15626.2	1545.63	-0.1
5400.0	5298.9	1.518	1.026	34.688	27.824	51.893	48.38	4.410	15839.6	1546.51	0.3
5450.0	5347.4	1.522	1.024	34.689	27.825	52.103	48.49	4.434	16054.0	1547.41	0.1
5500.0	5395.9	1.528	1.023	34.691	27.827	52.314	48.59	4.459	16269.6	1548.31	0.4
5550.0	5444.4	1.533	1.021	34.691	27.827	52.522	48.79	4.483	16486.4	1549.21	0.1
5600.0	5492.9	1.537	1.018	34.690	27.826	52.730	49.05	4.508	16704.2	1550.10	0.0
5650.0	5541.3	1.541	1.016	34.691	27.827	52.940	49.19	4.532	16923.2	1550.99	0.3
5700.0	5589.8	1.547	1.015	34.691	27.827	53.147	49.41	4.557	17143.3	1551.90	-0.5
5750.0	5638.2	1.553	1.014	34.693	27.829	53.356	49.52	4.581	17364.6	1552.80	-0.1

CTD REPORT RAMA-4 STATION: 27 CAST: 2 DN
POSITION: 27DEG 59.5MIN N 151DEG 56.3MIN E DATE: 17 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
5800.0	5686.7	1.558	1.012	34.692	27.828	53.563	49.78	4.606	17587.0	1553.70	-0.4
5850.0	5735.1	1.564	1.011	34.692	27.828	53.770	50.02	4.631	17810.6	1554.60	0.1
5900.0	5783.5	1.570	1.010	34.693	27.829	53.978	50.19	4.656	18035.4	1555.50	-0.1
5950.0	5831.9	1.576	1.009	34.692	27.828	54.184	50.50	4.681	18261.3	1556.41	0.1

CTD REPORT RAMA-4 STATION: 28 CAST: 1 DN
POSITION: 27DEG 44.0MIN N 152DEG 0.1MIN E DATE: 17 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
0.0	0.0	29.150	29.150	35.250	22.263	22.263	558.63	0.000	0.0	1543.96	
10.0	9.9	29.163	29.160	35.250	22.260	22.302	559.44	0.056	0.3	1544.14	101.8
20.0	19.8	28.483	28.478	35.243	22.474	22.559	539.40	0.112	1.1	1542.84	252.4
30.0	29.8	27.480	27.473	35.230	22.784	22.911	510.28	0.164	2.5	1540.80	264.8
40.0	39.7	26.726	26.716	35.235	23.024	23.194	487.77	0.214	4.4	1539.27	338.9
50.0	49.6	25.102	25.091	35.190	23.487	23.700	443.96	0.262	6.7	1535.60	353.5
60.0	59.5	24.119	24.106	35.160	23.757	24.014	418.56	0.305	9.5	1533.35	249.1
70.0	69.5	23.122	23.107	35.101	24.003	24.303	395.48	0.346	12.8	1530.97	202.5
80.0	79.4	22.441	22.424	35.073	24.177	24.520	379.32	0.385	16.4	1529.37	180.8
90.0	89.3	21.652	21.634	35.046	24.377	24.765	360.54	0.422	20.4	1527.44	178.0
100.0	99.2	21.089	21.069	35.062	24.544	24.976	344.96	0.458	24.8	1526.13	149.1
110.0	109.1	20.550	20.529	35.055	24.685	25.161	331.87	0.492	29.5	1524.83	103.5
120.0	119.1	20.232	20.209	35.038	24.758	25.277	325.31	0.525	34.5	1524.11	78.2
130.0	129.0	19.927	19.902	35.048	24.847	25.410	317.22	0.557	39.9	1523.44	76.1
140.0	138.9	19.548	19.522	35.006	24.915	25.522	311.08	0.589	45.6	1522.50	69.9
150.0	148.8	19.056	19.028	34.937	24.990	25.641	304.21	0.620	51.6	1521.20	72.5
160.0	158.7	18.732	18.703	34.924	25.063	25.759	297.56	0.650	57.9	1520.43	58.8
170.0	168.7	18.495	18.464	34.907	25.110	25.850	293.37	0.679	64.5	1519.90	60.2
180.0	178.6	18.141	18.109	34.890	25.186	25.971	286.42	0.708	71.3	1519.02	54.0
190.0	188.5	17.918	17.885	34.862	25.221	26.049	283.46	0.737	78.5	1518.50	34.4
200.0	198.4	17.686	17.651	34.833	25.256	26.129	280.39	0.765	85.9	1517.95	38.9
210.0	208.3	17.396	17.360	34.797	25.299	26.217	276.54	0.793	93.7	1517.21	43.5
220.0	218.2	17.215	17.177	34.798	25.344	26.306	272.56	0.821	101.7	1516.84	35.0
230.0	228.2	17.085	17.046	34.791	25.371	26.377	270.38	0.848	109.9	1516.61	34.4
240.0	238.1	16.779	16.739	34.752	25.414	26.465	266.48	0.875	118.5	1515.80	30.9
250.0	248.0	16.677	16.635	34.745	25.433	26.528	264.98	0.901	127.3	1515.65	30.4
260.0	257.9	16.402	16.359	34.715	25.475	26.615	261.21	0.928	136.4	1514.94	37.2
270.0	267.8	16.222	16.178	34.703	25.508	26.693	258.35	0.954	145.7	1514.54	24.5
280.0	277.7	16.130	16.084	34.696	25.524	26.753	257.09	0.979	155.3	1514.42	20.9
290.0	287.6	15.981	15.934	34.684	25.550	26.823	254.94	1.005	165.1	1514.11	27.4
300.0	297.6	15.800	15.752	34.668	25.579	26.897	252.39	1.030	175.2	1513.69	27.7
310.0	307.5	15.642	15.592	34.655	25.605	26.968	250.15	1.056	185.5	1513.35	28.1
320.0	317.4	15.460	15.409	34.642	25.637	27.045	247.40	1.081	196.1	1512.93	24.6
330.0	327.3	15.359	15.307	34.635	25.654	27.107	245.99	1.105	206.9	1512.77	19.7
340.0	337.2	15.207	15.154	34.618	25.676	27.173	244.21	1.130	218.0	1512.44	21.9
350.0	347.1	15.066	15.011	34.606	25.698	27.240	242.33	1.154	229.3	1512.14	28.1
360.0	357.0	14.859	14.803	34.590	25.731	27.319	239.34	1.178	240.9	1511.63	28.6
370.0	366.9	14.746	14.689	34.588	25.755	27.387	237.35	1.202	252.7	1511.43	25.9
380.0	376.8	14.566	14.508	34.573	25.783	27.460	234.89	1.226	264.7	1511.00	30.8
390.0	386.7	14.356	14.297	34.557	25.816	27.538	231.92	1.249	277.0	1510.47	31.6
400.0	396.7	14.187	14.127	34.548	25.845	27.613	229.31	1.272	289.5	1510.08	30.6
410.0	406.6	13.959	13.898	34.525	25.876	27.690	226.53	1.295	302.2	1509.48	39.5
420.0	416.5	13.611	13.550	34.491	25.923	27.783	222.15	1.317	315.1	1508.46	28.9
430.0	426.4	13.560	13.497	34.490	25.933	27.838	221.43	1.340	328.3	1508.45	26.6
440.0	436.3	13.255	13.192	34.463	25.974	27.927	217.51	1.362	341.7	1507.58	48.6
450.0	446.2	12.901	12.838	34.439	26.027	28.027	212.48	1.383	355.3	1506.53	43.8
460.0	456.1	12.684	12.620	34.425	26.060	28.106	209.47	1.404	369.1	1505.95	28.7
470.0	466.0	12.523	12.458	34.414	26.083	28.175	207.40	1.425	383.1	1505.56	23.4
480.0	475.9	12.342	12.276	34.396	26.105	28.243	205.45	1.446	397.3	1505.08	31.6
490.0	485.8	12.068	12.002	34.378	26.144	28.329	201.76	1.466	411.7	1504.29	38.4
500.0	495.7	11.822	11.755	34.363	26.179	28.411	198.44	1.486	426.3	1503.59	37.9
510.0	505.6	11.524	11.457	34.339	26.217	28.496	194.85	1.506	441.1	1502.69	37.7
520.0	515.5	11.261	11.194	34.321	26.251	28.578	191.56	1.525	456.2	1501.92	36.1
530.0	525.4	11.011	10.943	34.307	26.286	28.660	188.26	1.544	471.4	1501.19	29.1
540.0	535.3	10.796	10.728	34.283	26.306	28.727	186.36	1.563	486.7	1500.56	18.7
550.0	545.2	10.668	10.599	34.272	26.320	28.788	185.08	1.582	502.3	1500.26	21.5
560.0	555.1	10.476	10.407	34.262	26.346	28.861	182.64	1.600	518.1	1499.73	21.3
570.0	565.0	10.330	10.260	34.247	26.360	28.921	181.39	1.618	534.0	1499.35	27.2
580.0	574.9	10.017	9.947	34.225	26.397	29.006	177.79	1.636	550.1	1498.36	42.0
590.0	584.8	9.670	9.601	34.204	26.439	29.098	173.60	1.654	566.4	1497.24	35.1
600.0	594.7	9.458	9.388	34.189	26.462	29.168	171.35	1.671	582.9	1496.61	27.3
610.0	604.6	9.179	9.109	34.165	26.489	29.244	168.68	1.688	599.5	1495.71	35.5
620.0	614.5	8.812	8.743	34.139	26.526	29.332	164.82	1.705	616.3	1494.48	36.8
630.0	624.4	8.562	8.493	34.127	26.556	29.410	161.89	1.721	633.2	1493.70	25.0
640.0	634.3	8.392	8.323	34.114	26.572	29.473	160.34	1.737	650.4	1493.21	23.0
650.0	644.2	8.134	8.065	34.097	26.597	29.547	157.75	1.753	667.6	1492.37	33.9
660.0	654.1	7.835	7.766	34.087	26.633	29.633	154.08	1.769	685.1	1491.39	32.7
670.0	664.0	7.600	7.531	34.073	26.656	29.705	151.74	1.784	702.6	1490.63	23.8
680.0	673.9	7.407	7.338	34.063	26.676	29.773	149.76	1.799	720.4	1490.04	24.4
690.0	683.8	7.222	7.153	34.062	26.701	29.846	147.28	1.814	738.3	1489.49	21.2
700.0	693.7	7.055	6.986	34.049	26.713	29.907	145.97	1.829	756.3	1488.98	20.3
710.0	703.6	6.895	6.826	34.051	26.737	29.978	143.67	1.843	774.4	1488.53	27.9
720.0	713.5	6.633	6.564	34.041	26.764	30.055	140.85	1.858	792.8	1487.65	36.5
730.0	723.4	6.334	6.266	34.041	26.802	30.145	136.85	1.871	811.2	1486.63	37.5
740.0	733.3	6.068	6.000	34.035	26.831	30.224	133.80	1.885	829.8	1485.73	32.2
750.0	743.2	5.876	5.809	34.042	26.860	30.302	130.84	1.898	848.5	1485.13	33.0
760.0	753.1	5.661	5.594	34.049	26.892	30.383	127.61	1.911	867.3	1484.44	20.7
770.0	763.0	5.622	5.554	34.051	26.898	30.436	127.08	1.924	886.3	1484.45	9.9
780.0	772.9	5.545	5.477	34.054	26.910	30.495	125.97	1.937	905.4	1484.31	18.1
790.0	782.8	5.415	5.347	34.062	26.932	30.564	123.81	1.949	924.6	1483.95	25.6
800.0	792.6	5.274	5.206	34.074	26.958	30.639	121.22	1.962	944.0	1483.56	20.4
810.0	802.5	5.208	5.139	34.080	26.970	30.698	120.07	1.974	963.4	1483.46	13.7
820.0	812.4	5.106	5.037	34.081	26.982	30.758	118.80	1.986	983.0	1483.21	14.5
830.0	822.3	5.046	4.976	34.090	26.996	30.819	117.48	1.997	1002.7	1483.14	16.2
840.0	832.2	4.974	4.904	34.101	27.013	30.883	115.88	2.009	1022.5	1483.02	17.4
850.0	842.1	4.895	4.825	34.110	27.029	30.946	114.33	2.021	1042.4	1482.87	18.5
860.0	852.0	4.800	4.729	34.120	27.048	31.012	112.52	2.032	1062.5	1482.66	17.7
870.0	861.9	4.727	4.656	34.128	27.062	31.074	111.13	2.043	1082.6	1482.53	11.8
880.0	871.8	4.686	4.614	34.132	27.070	31.128	110.42	2.054	1102.9	1482.53	13.0
890.0	881.6	4.601	4.529	34.141	27.086	31.192	108.81	2.065	1123.3	1482.36	23.1
900.0	891.5	4.497	4.425	34.161	27.113	31.267	106.16	2.076	1143.7	1482.12	22.1
910.0	901.4	4.437	4.364	34.172	27.128	31.329	104.71	2.087	1164.3	1482.04	13.0
920.0	911.3	4.394	4.321	34.178	27.137	31.385	103.86	2.097	1185.0	1482.04	16.2
930.0	921.2	4.307	4.234	34.193	27.158	31.453	101.78	2.107	1205.8	1481.86	15.1
940.0	931.1	4.268	4.194	34.197	27.166	31.507	101.11	2.117	1226.6	1481.86	7.2
950.0	941.0	4.254	4.179	34.203	27.172	31.560	100.58	2.127	1247.6	1481.98	7.1
960.0	950.9	4.217	4.142	34.207	27.179	31.613	99.92	2.138	1268.7	1481.99	15.1
970.0	960.7	4.133	4.057	34.223	27.200	31.682	97.84	2.147	1289.9	1481.83	14.8

28 JAN 81

CTD REPORT RAMA-4 STATION: 28 CAST: 1 DN
POSITION 27DEG 44.0MIN N 152DEG 0.1MIN E DATE 17 JUL 80

PRESS DB	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY O/OO	SIGMA THETA	SIGMA Z	SV ANOM CL/TON	DYN Z M	TRANSPORT FUNCTION	SOUND V M/SEC	VAIS FQ SQD*1E6
980.0	970.6	4.121	4.045	34.230	27.207	31.735	97.26	2.157	1311.2	1481.95	14.1
990.0	980.5	4.073	3.996	34.250	27.228	31.803	95.30	2.167	1332.5	1481.94	18.7
1000.0	990.4	4.021	3.944	34.263	27.244	31.865	93.81	2.176	1354.0	1481.90	10.8
1050.0	1039.8	3.895	3.814	34.292	27.280	32.132	90.59	2.223	1462.7	1482.23	8.2
1100.0	1089.2	3.766	3.682	34.324	27.318	32.403	87.09	2.267	1573.6	1482.55	12.0
1150.0	1138.6	3.562	3.476	34.357	27.364	32.683	82.65	2.310	1686.6	1482.55	9.7
1200.0	1188.0	3.481	3.391	34.386	27.395	32.944	79.93	2.350	1801.7	1483.06	6.3
1250.0	1237.3	3.335	3.243	34.418	27.435	33.215	76.22	2.389	1918.7	1483.31	8.6
1300.0	1286.7	3.160	3.065	34.435	27.464	33.479	73.27	2.427	2037.5	1483.41	6.6
1350.0	1336.0	3.016	2.919	34.449	27.488	33.736	70.89	2.463	2158.2	1483.63	4.6
1400.0	1385.4	2.866	2.766	34.461	27.511	33.992	68.58	2.498	2280.6	1483.83	7.2
1450.0	1434.7	2.672	2.570	34.470	27.535	34.250	65.99	2.532	2404.6	1483.83	4.8
1500.0	1484.0	2.604	2.499	34.483	27.551	34.497	64.53	2.564	2530.3	1484.38	5.1

CTD DATA PLOTS

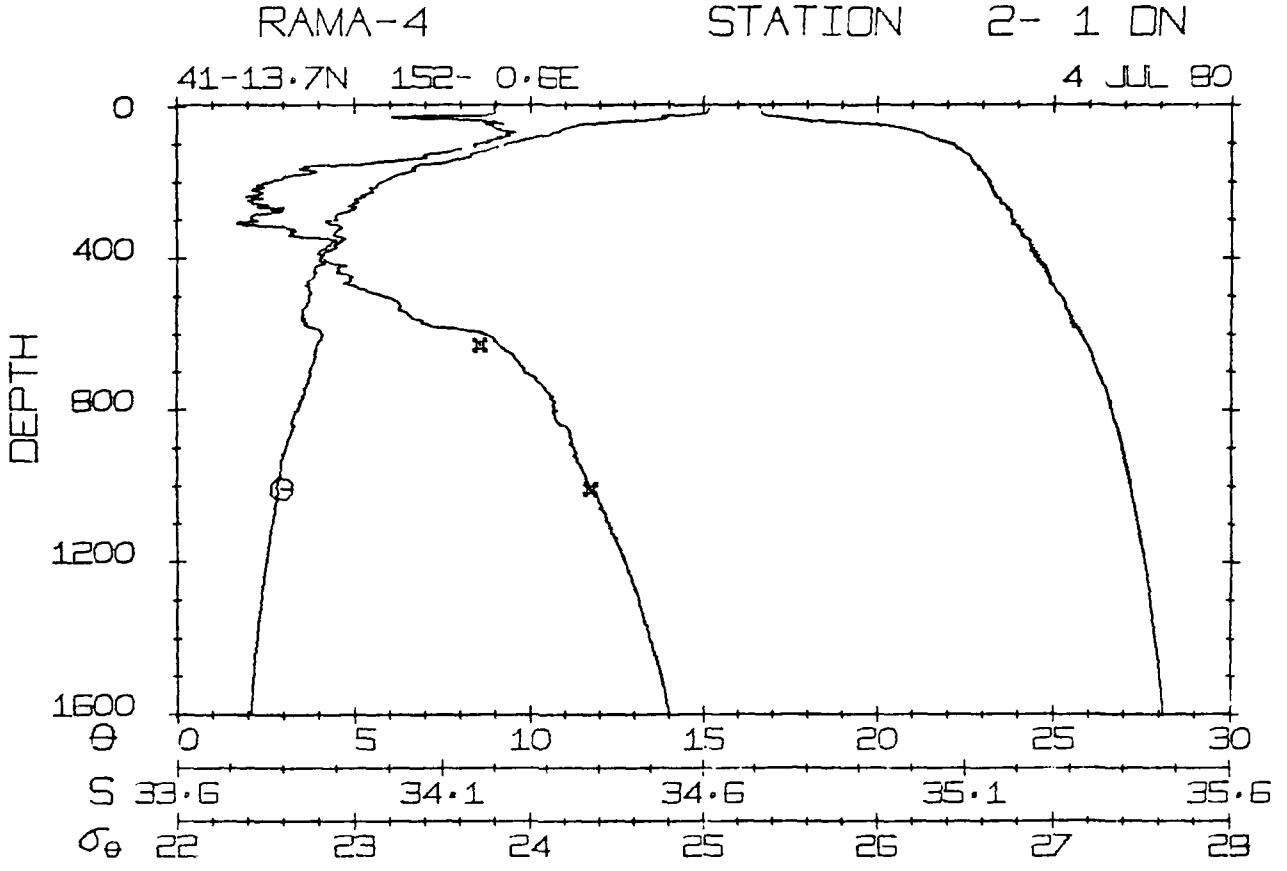
Shallow and Deep Plots

Of Potential Temperature, Salt, and

Sigma Theta As A Function

Of Pressure and Potential Temperature

Versus Salinity Diagrams


RAMA-4
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41-13.7N 152- 0.6E
4 JUL 80
DEPTH
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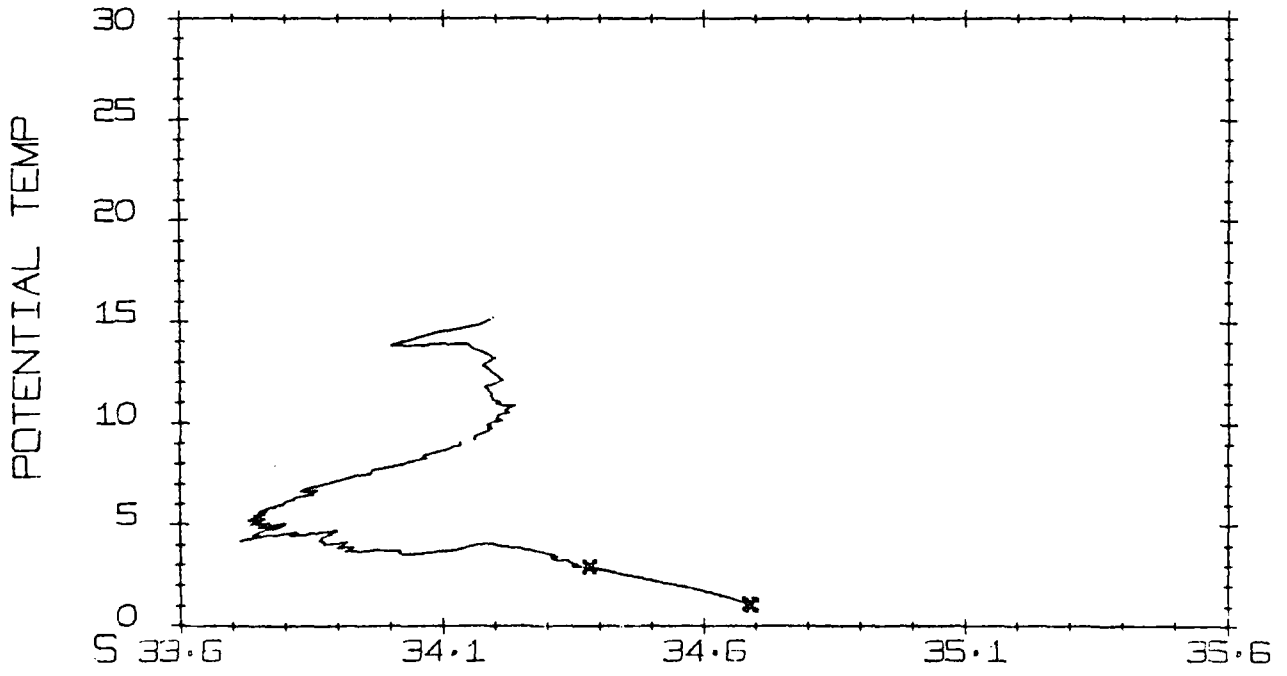
800
1200
1600
θ
0 5 10 15 20 25 30
S
33.6 34.1 34.6 35.1 35.6
σθ
22 23 24 25 26 27 28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5
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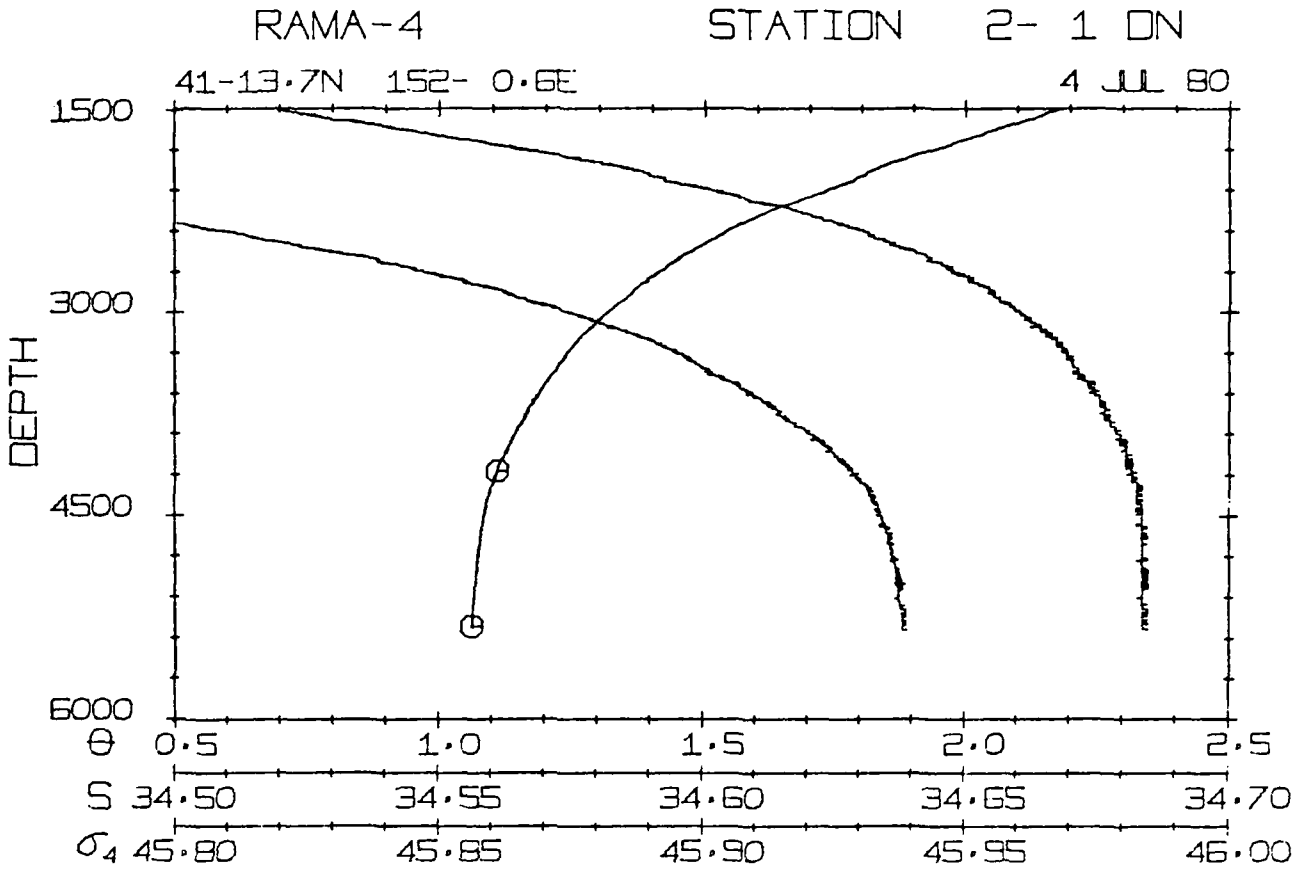
S
33.6 34.1 34.6 35.1 35.6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1500
3000
4500
6000
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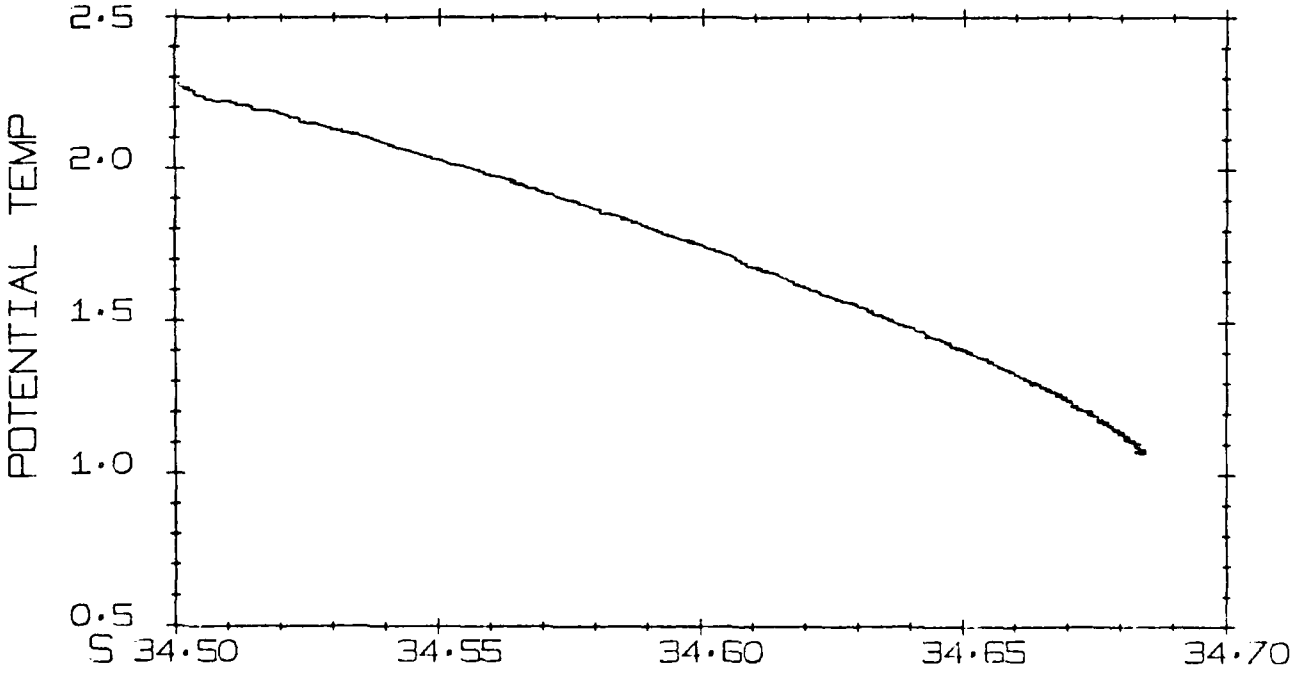
S 34.50 34.55 34.60 34.65 34.70
σ4 45.80 45.85 45.90 45.95 46.00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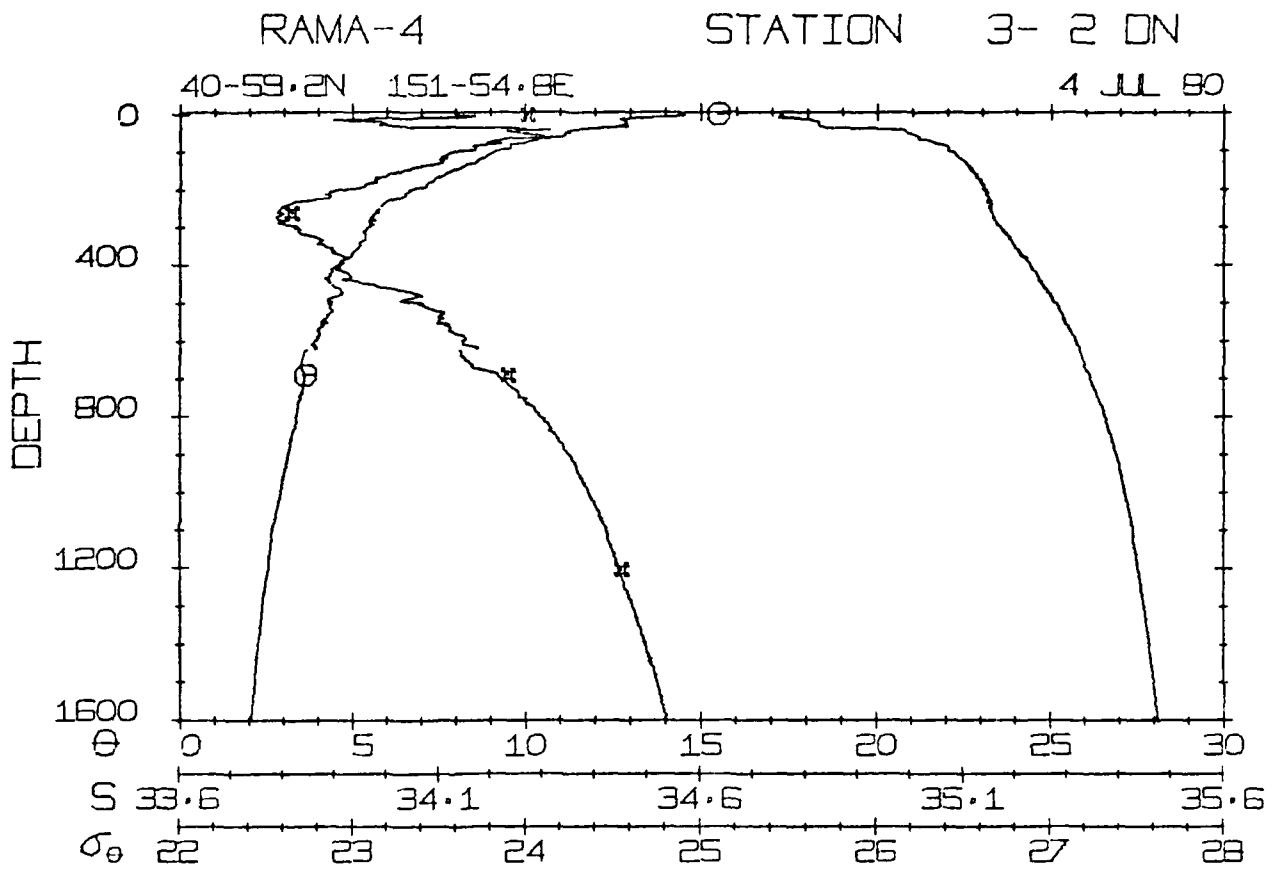
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DEPTH
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1600
θ
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S
33.6 34.1 34.6 35.1 35.6
σθ
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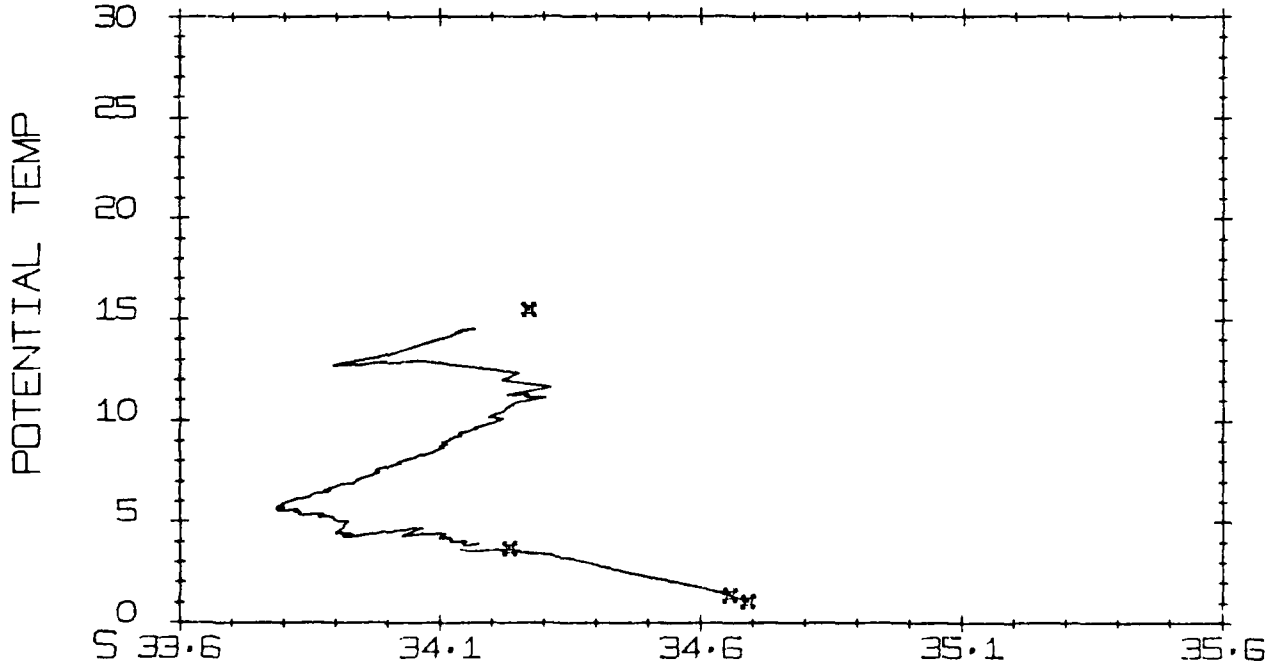
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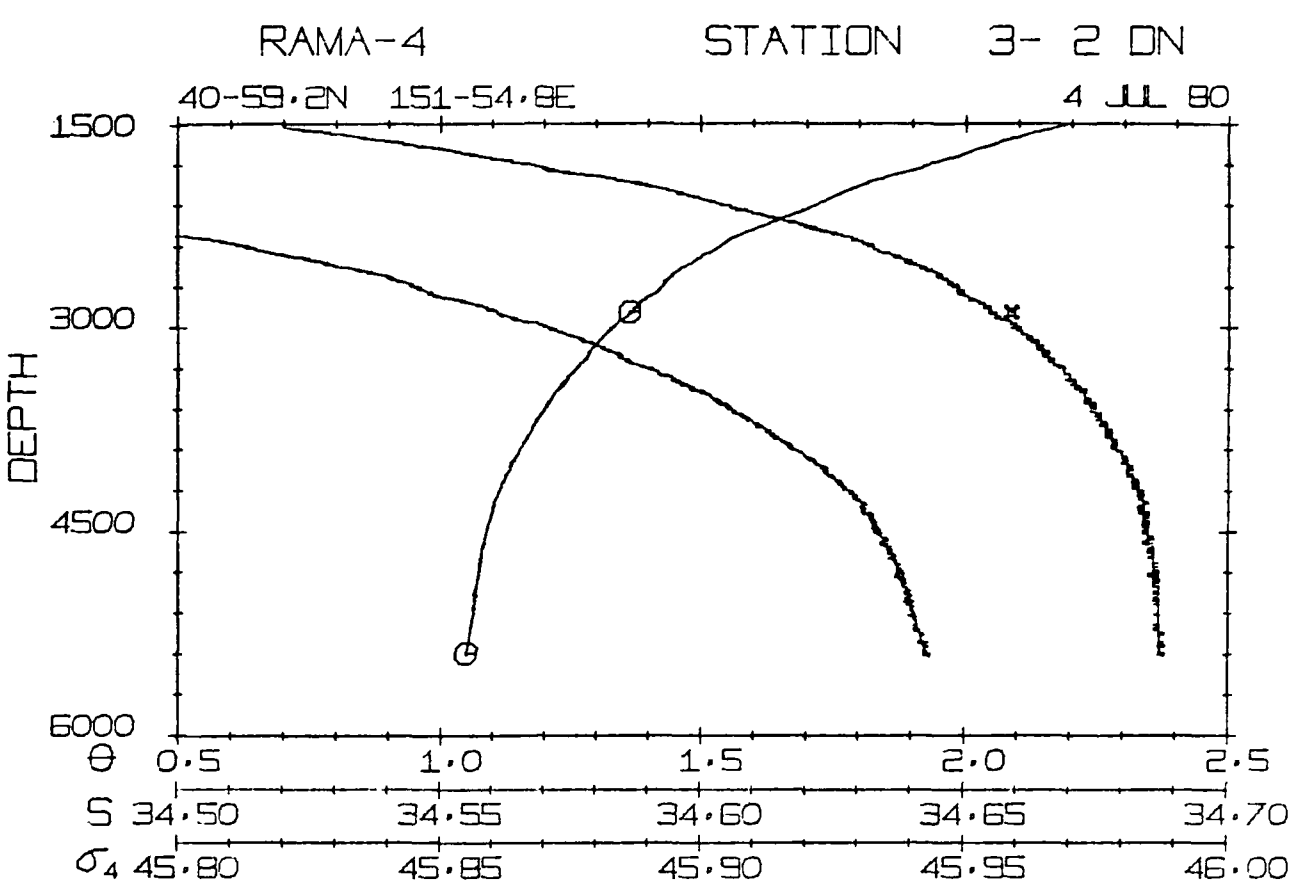
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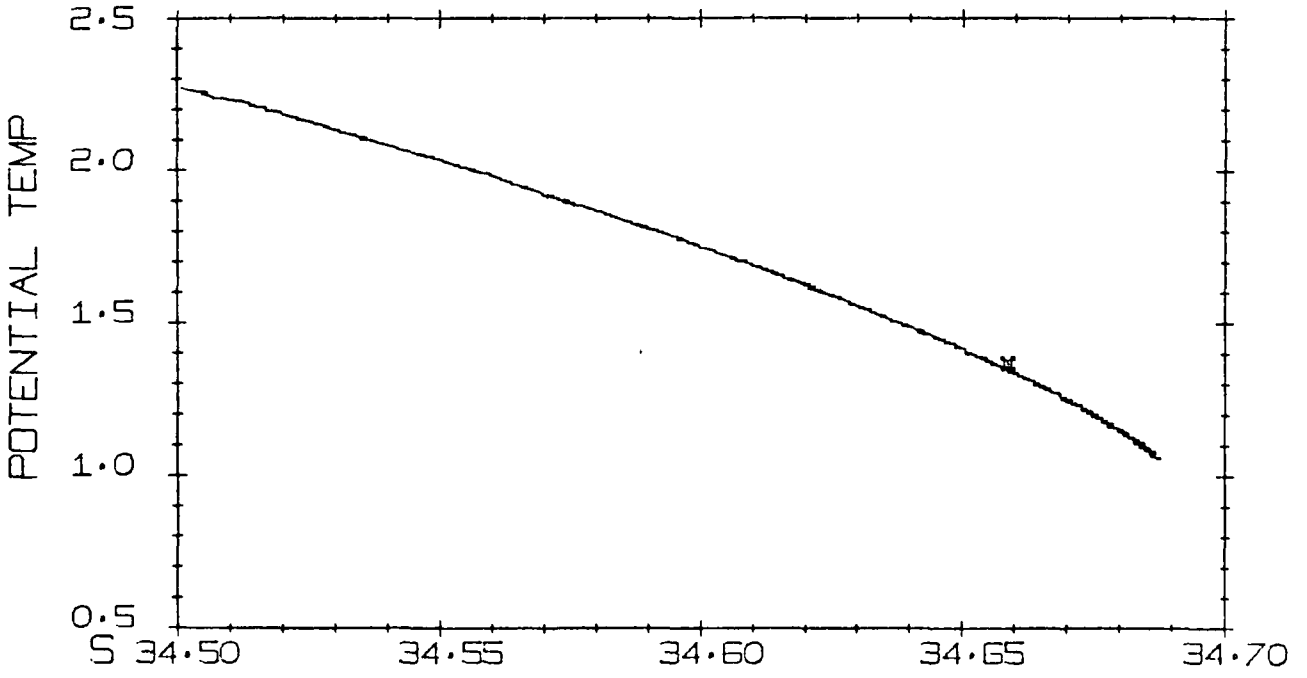
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1.5
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0.5
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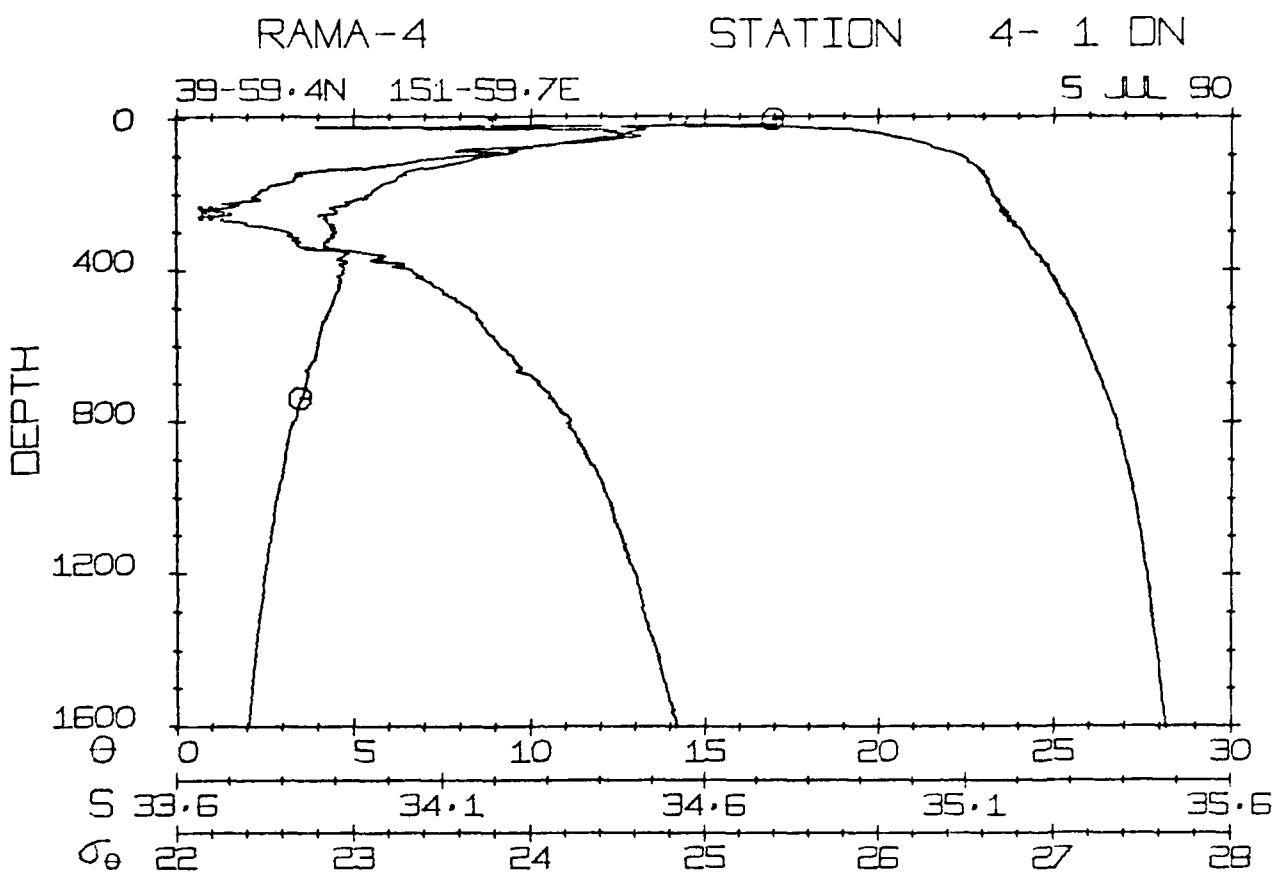
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1600
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σθ
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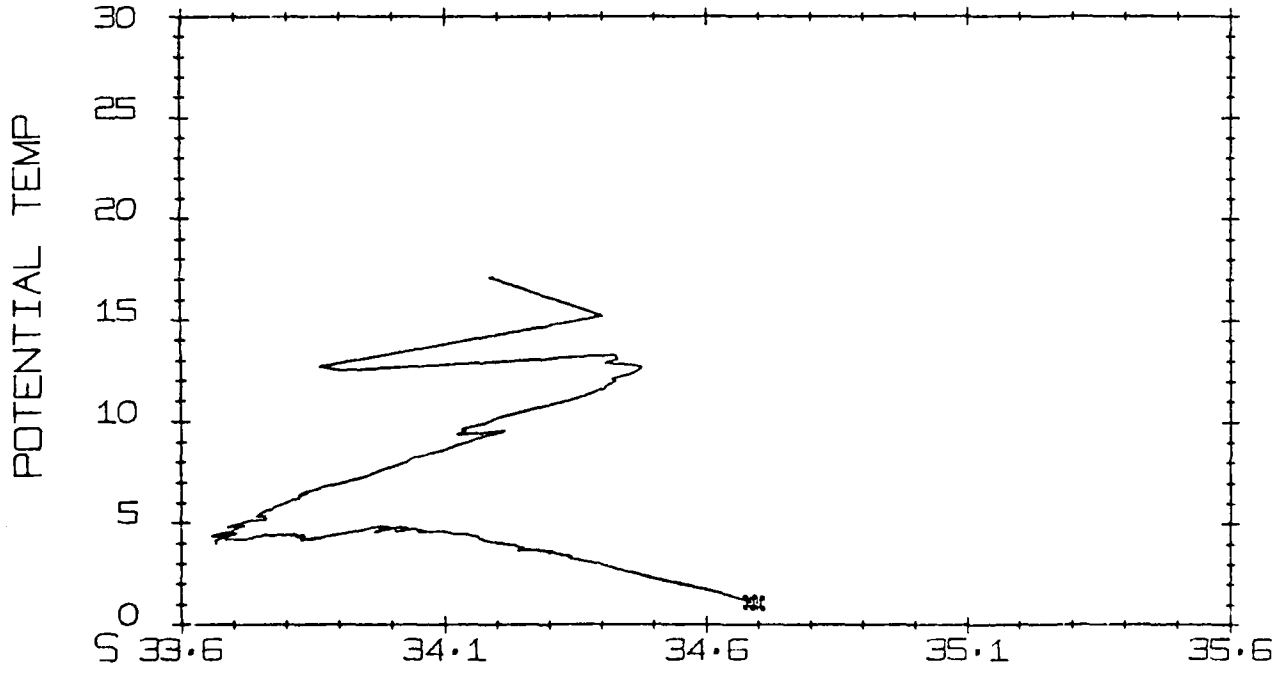
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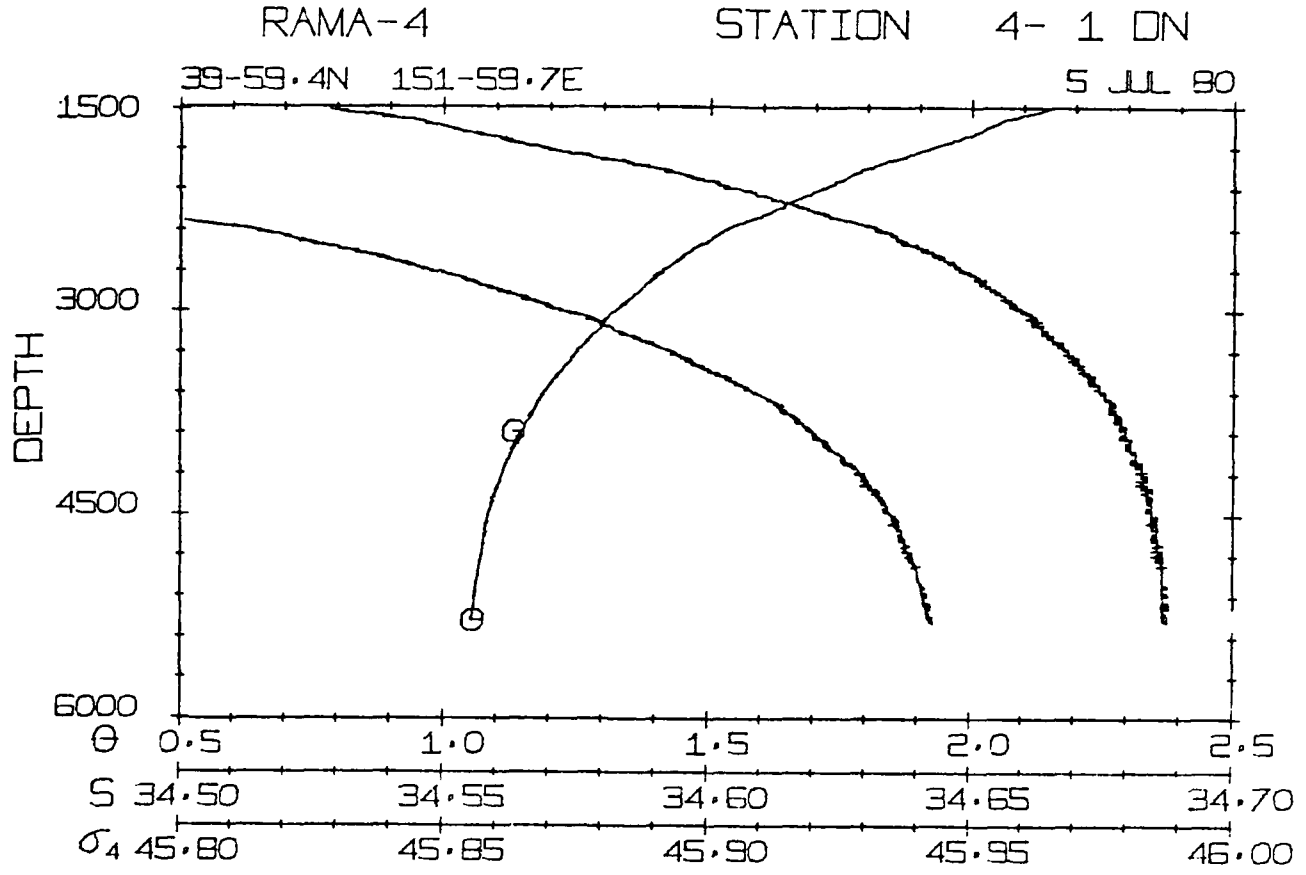
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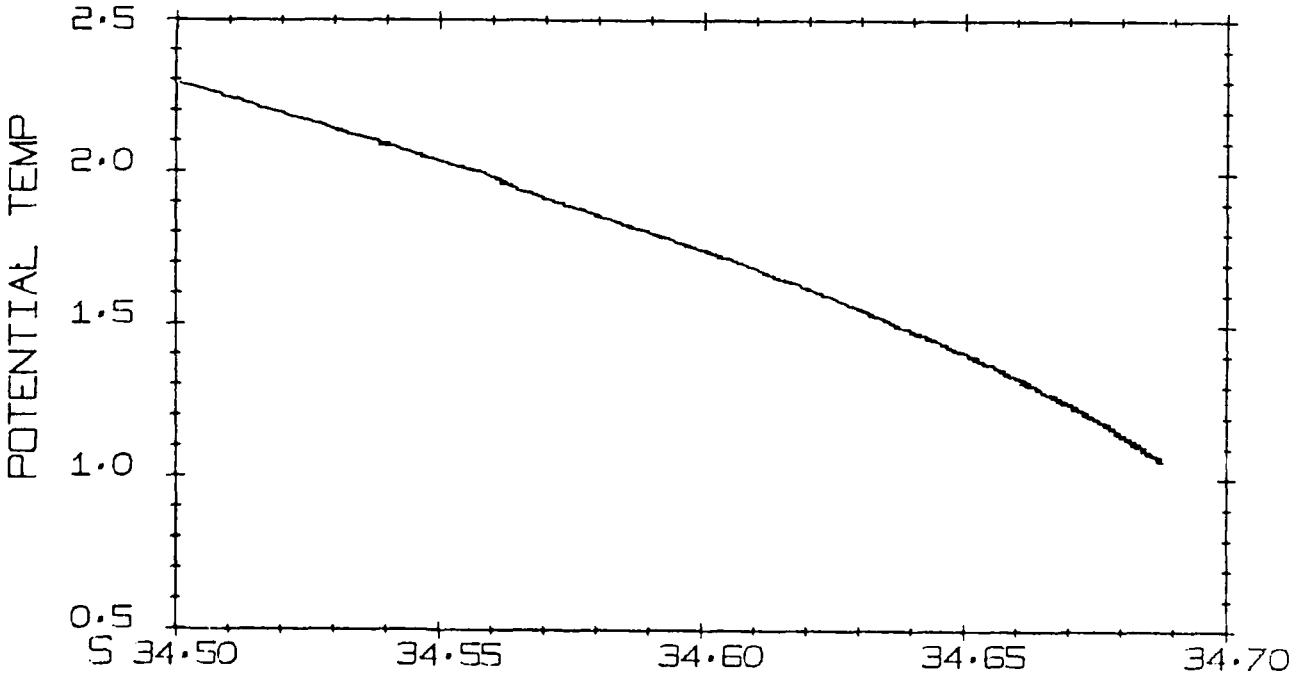
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0.5
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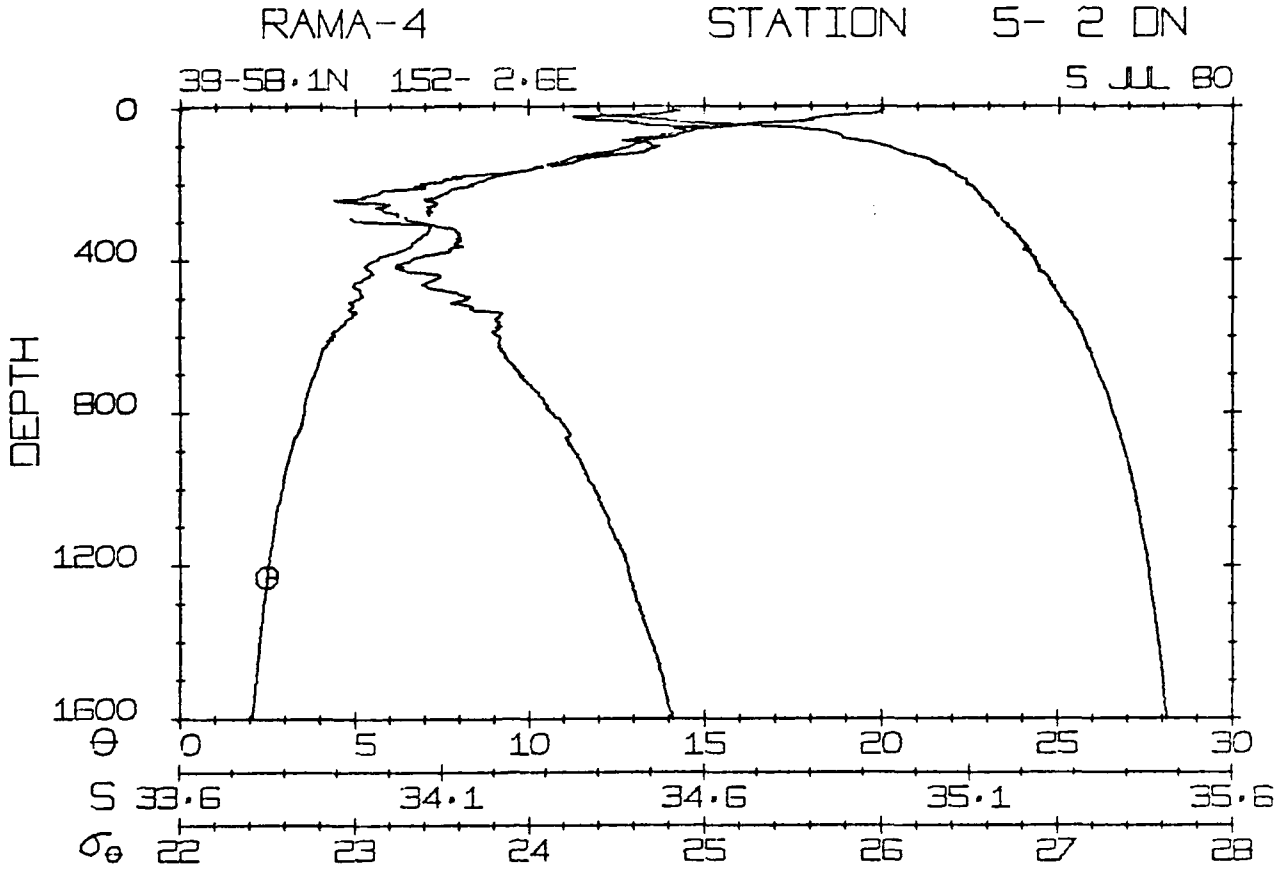
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σθ
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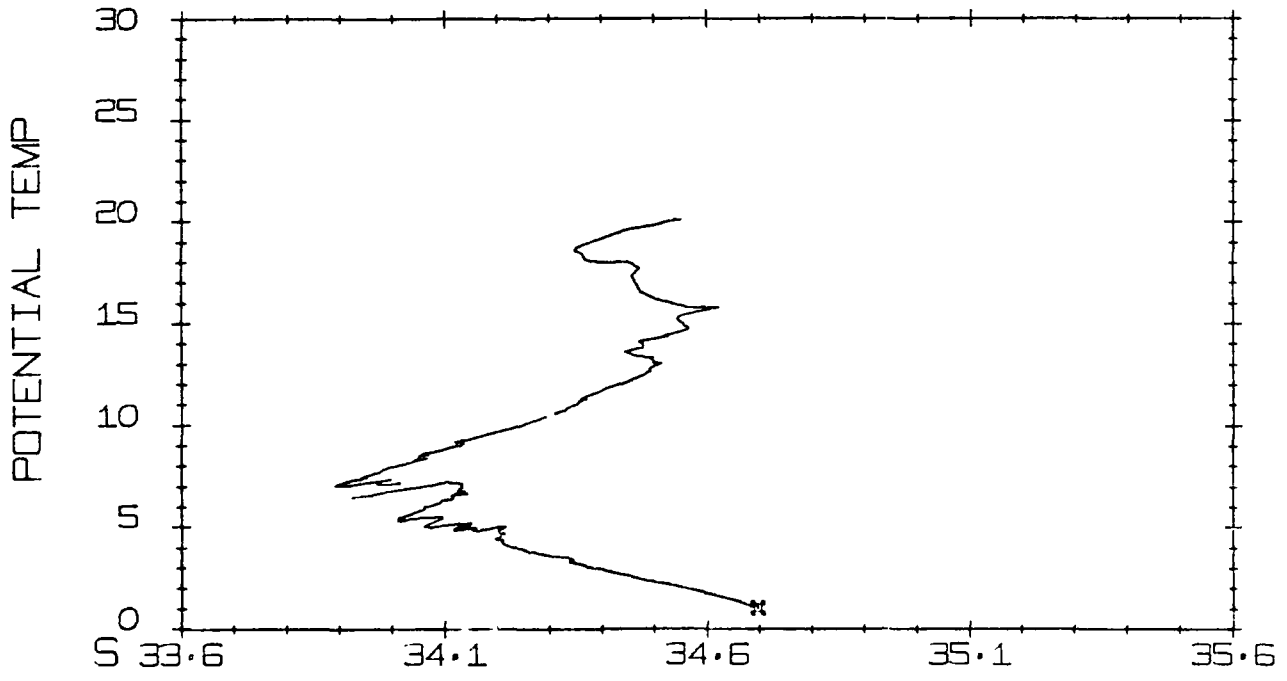
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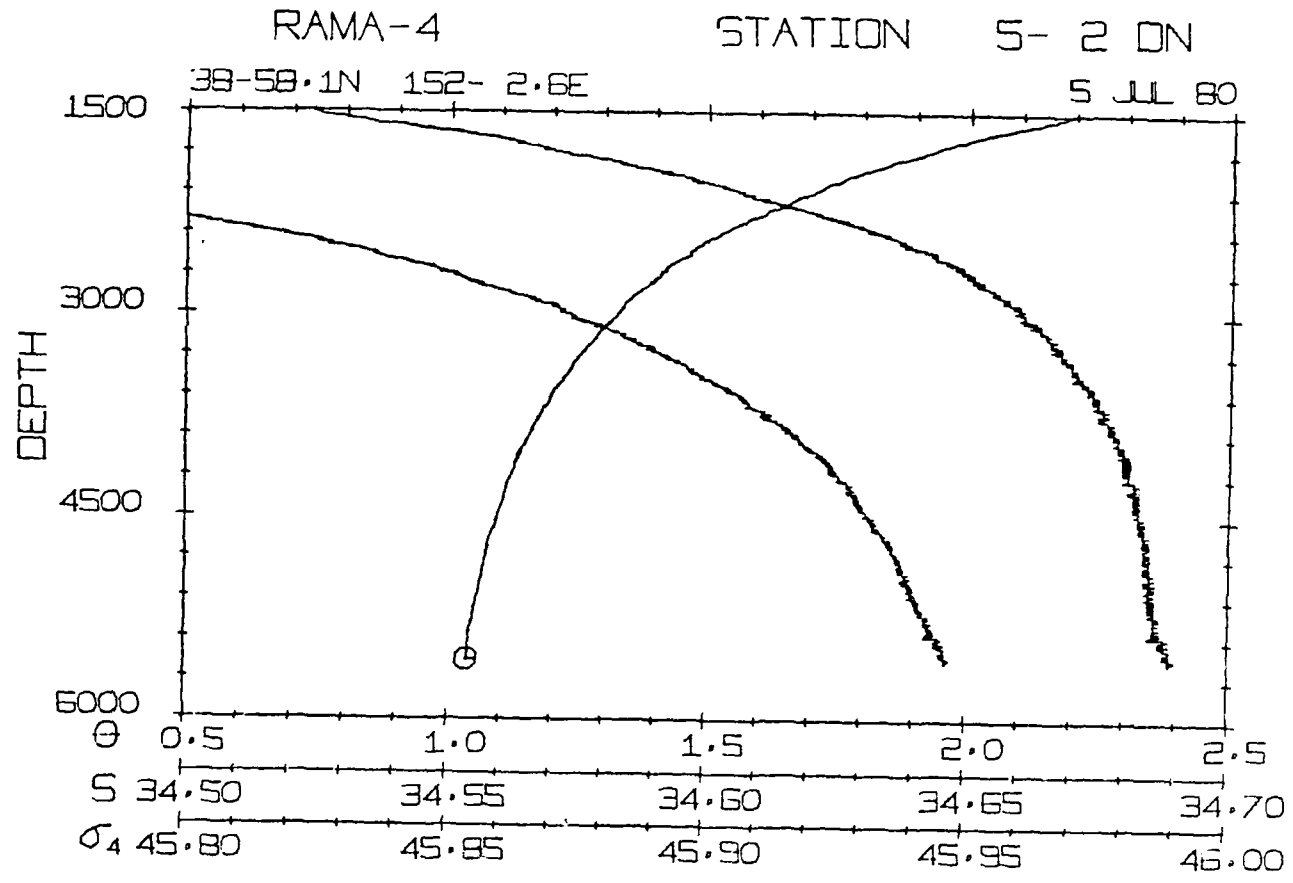
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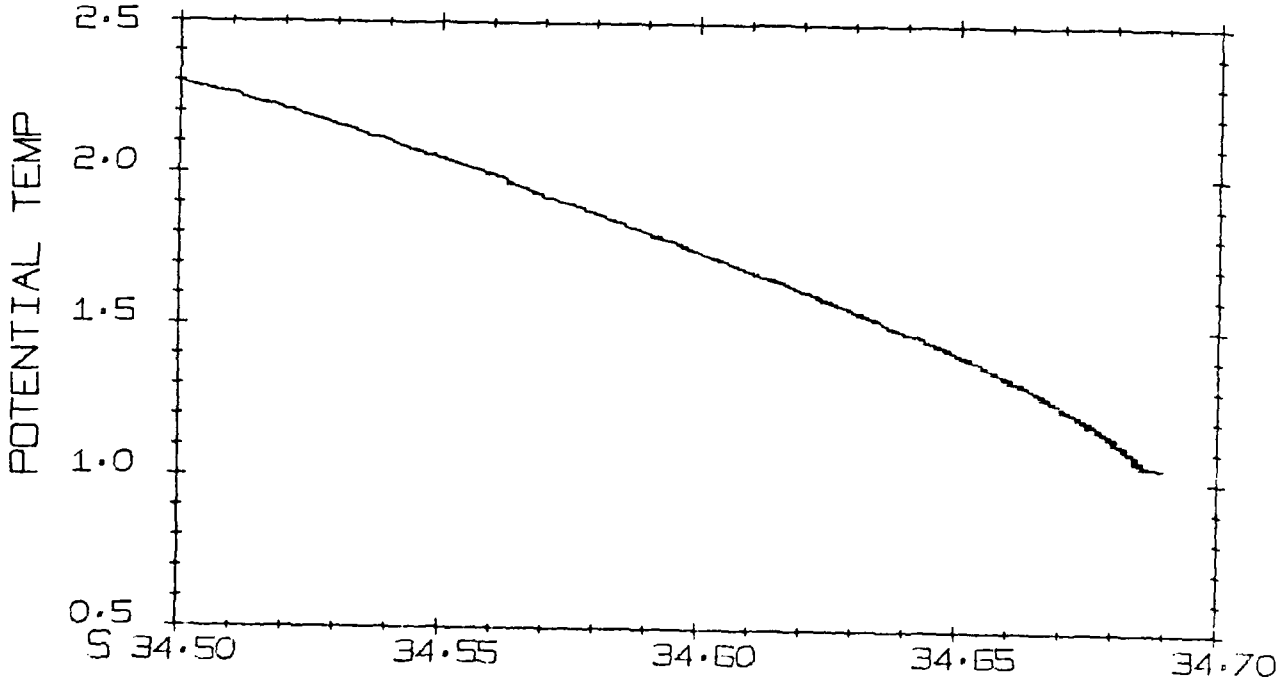
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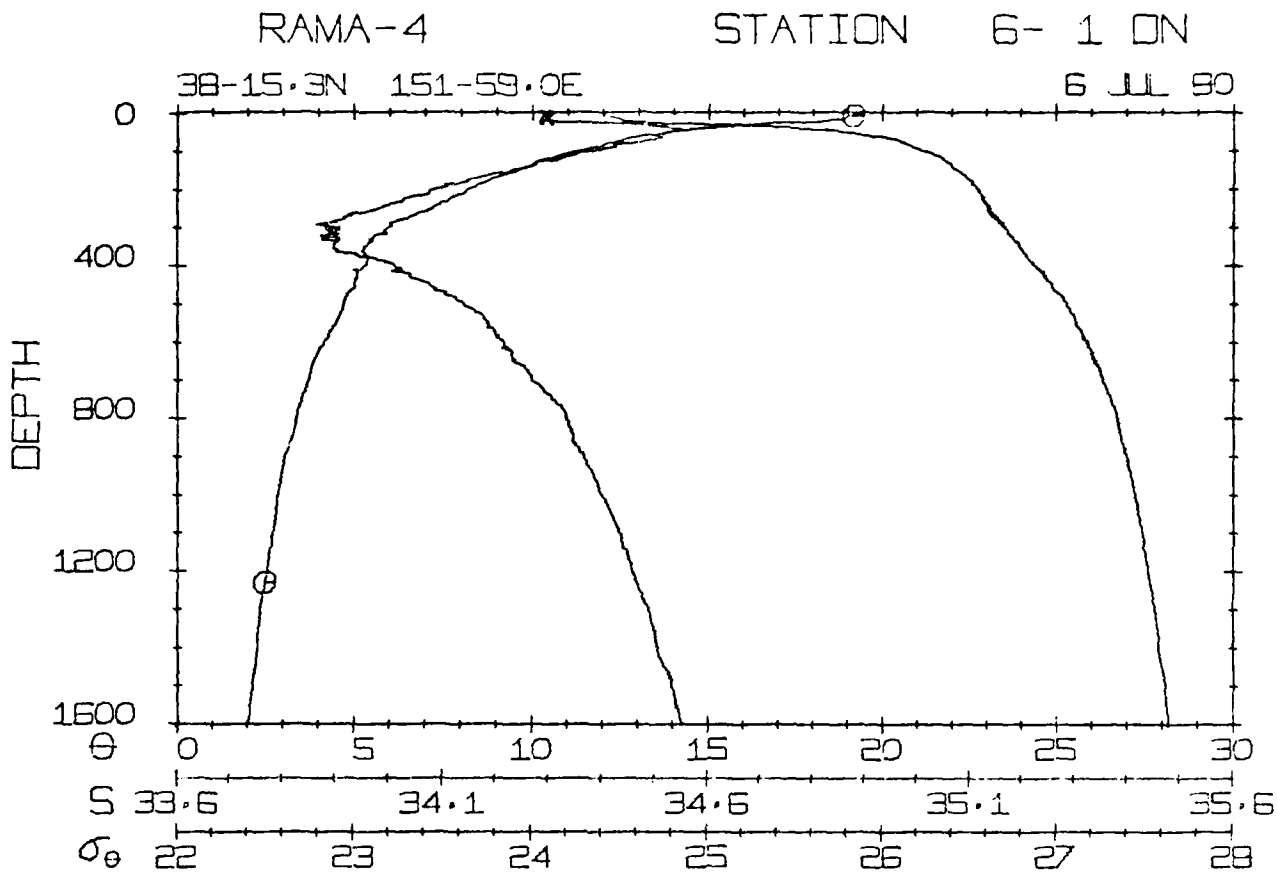
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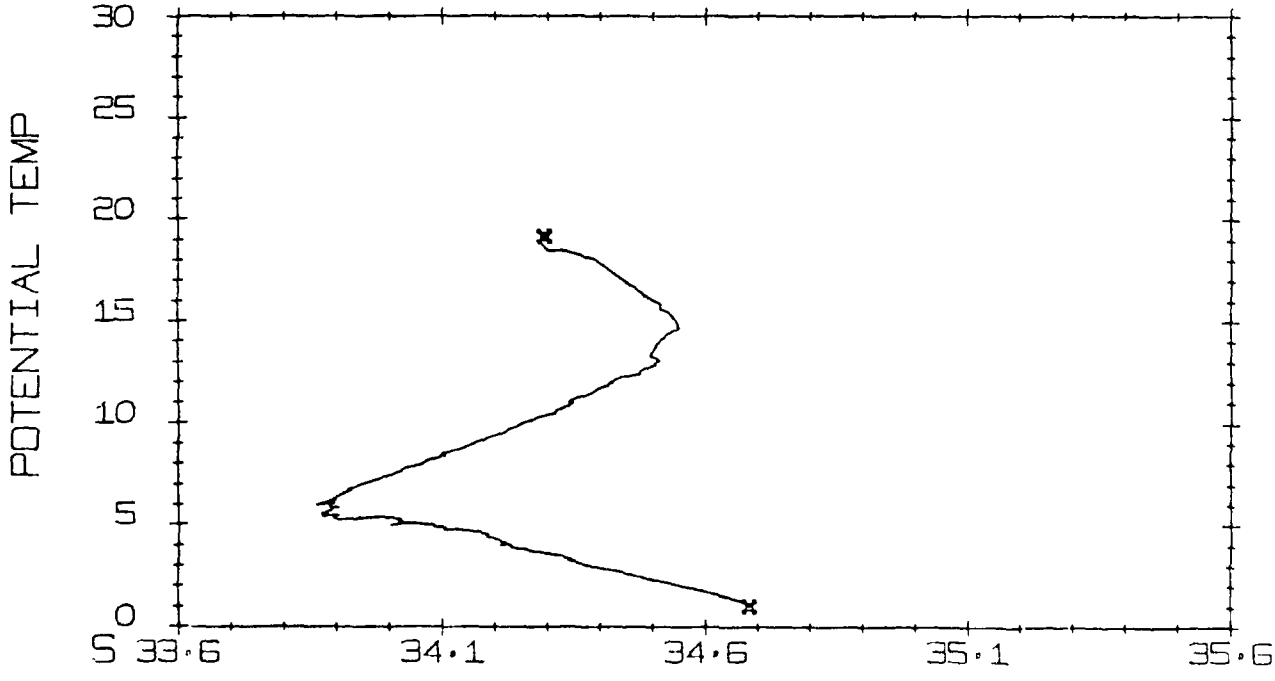
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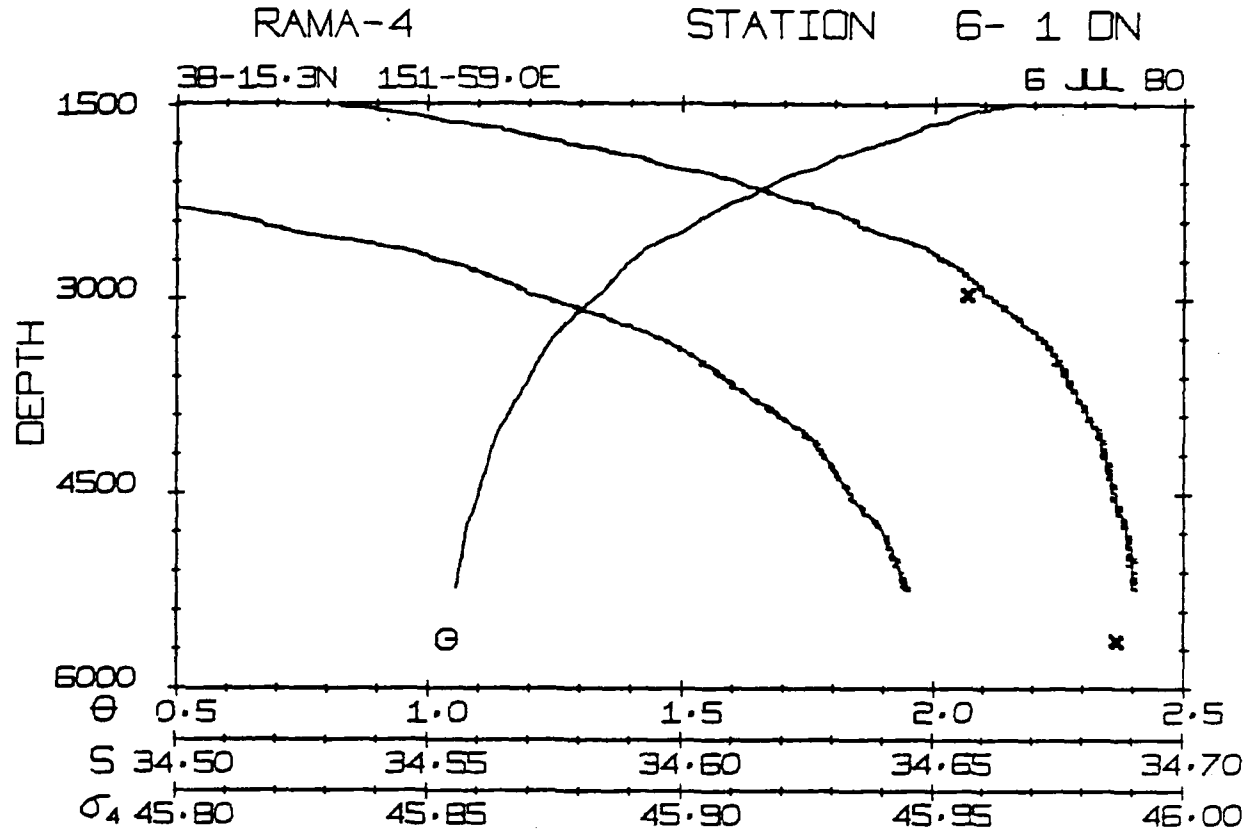
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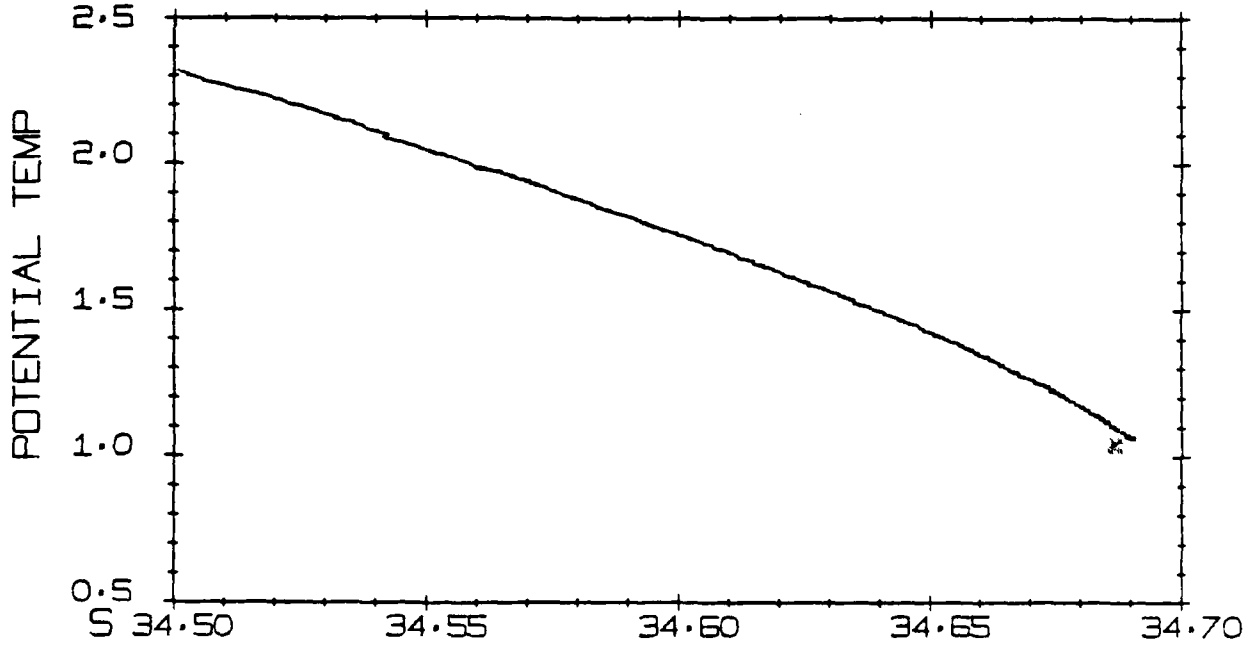
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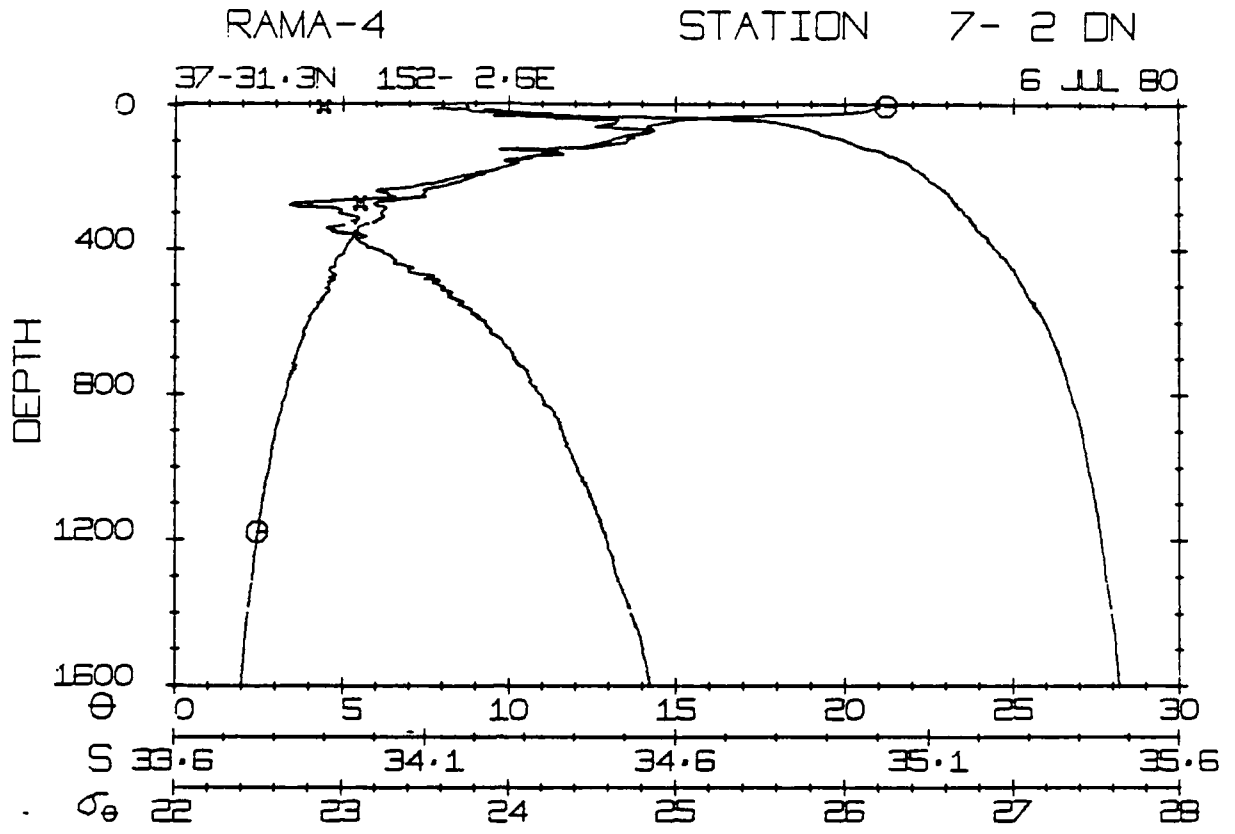
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σθ
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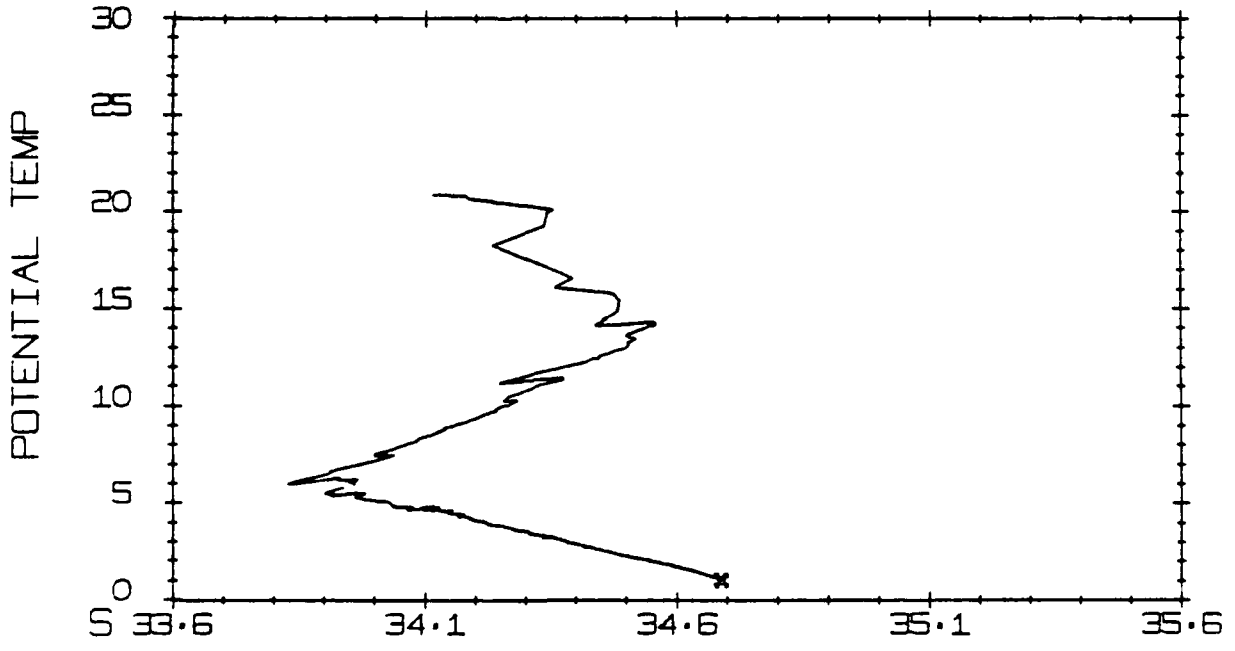
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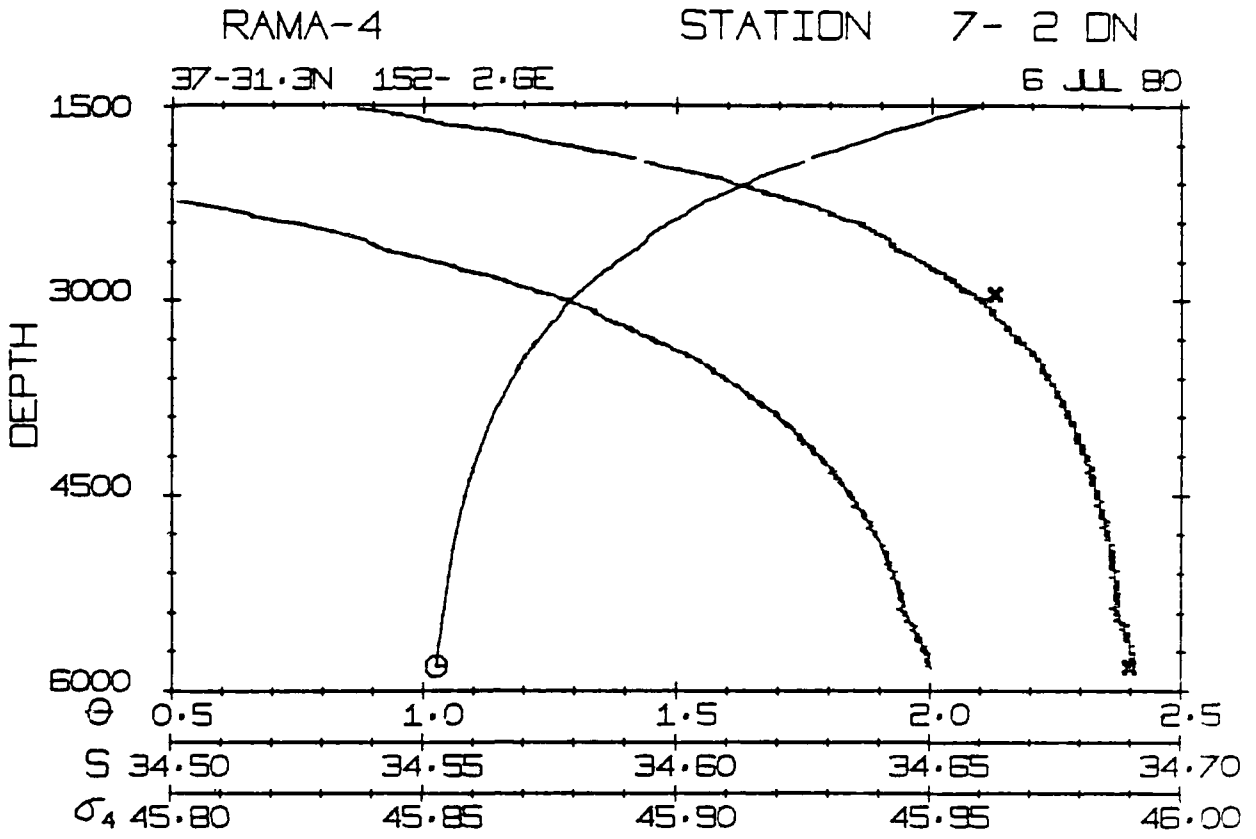
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S 34.50 34.55 34.60 34.65 34.70
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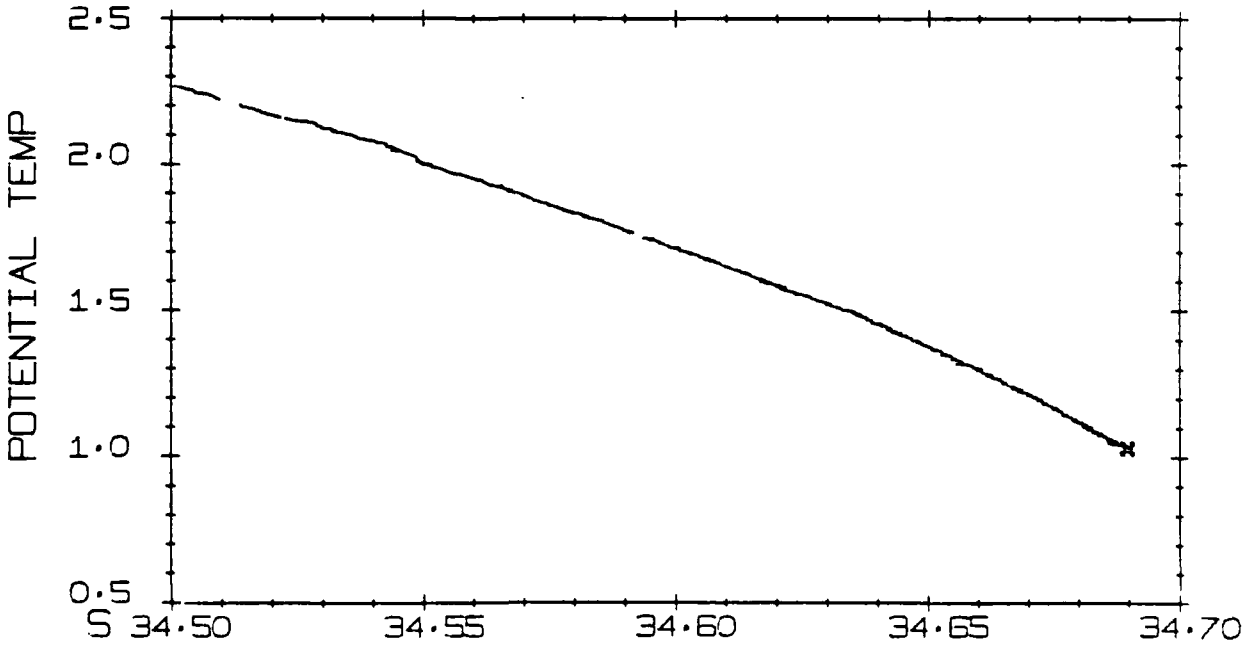
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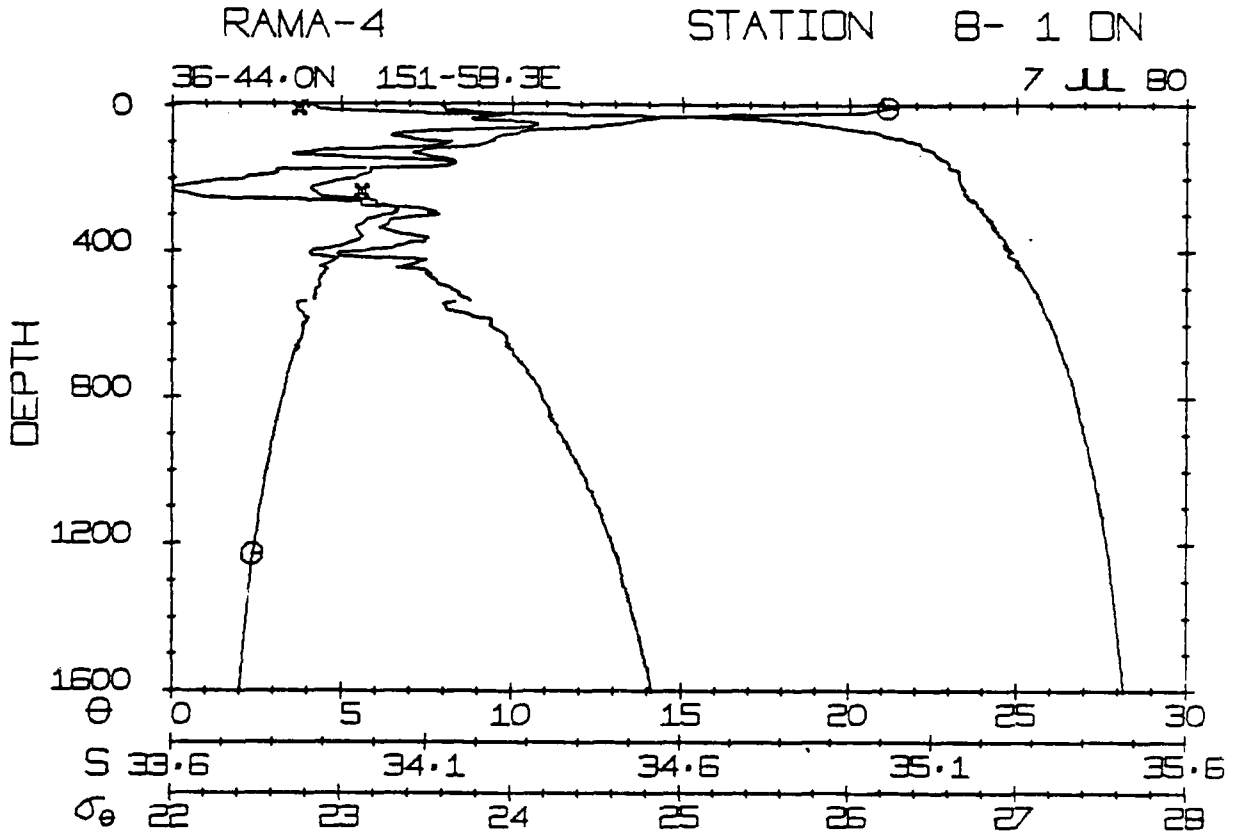
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1600
θ
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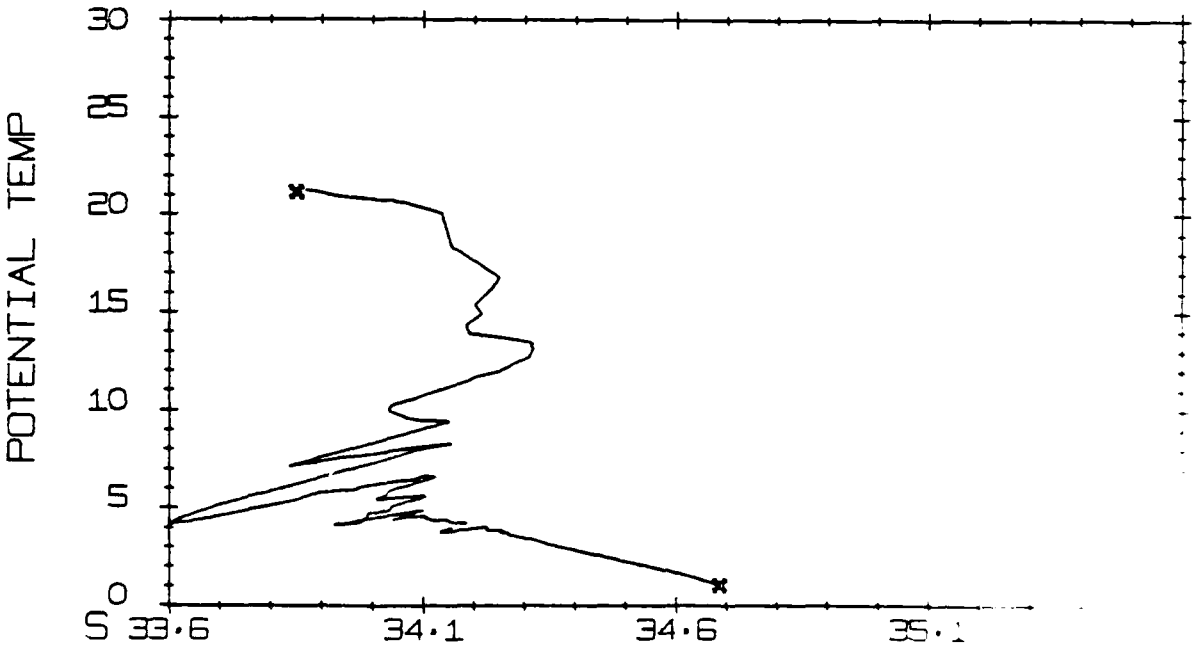
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AD-A103 291 OREGON STATE UNIV CORVALLIS SCHOOL OF OCEANOGRAPHY F/G 8/3
CTD TRANSECT OF THE KUROSHIO EXTENSION 28-41 DEG N, 152 DEG E, --ETC(U)
MAR 81 R T WILLIAMS N00014-79-C-0004
UNCLASSIFIED DATA-86 NL

2 OF 2
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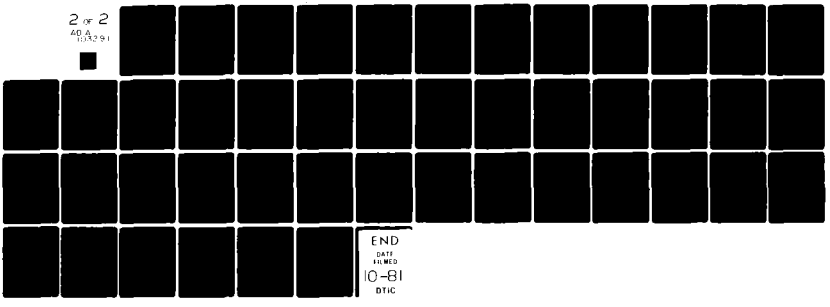

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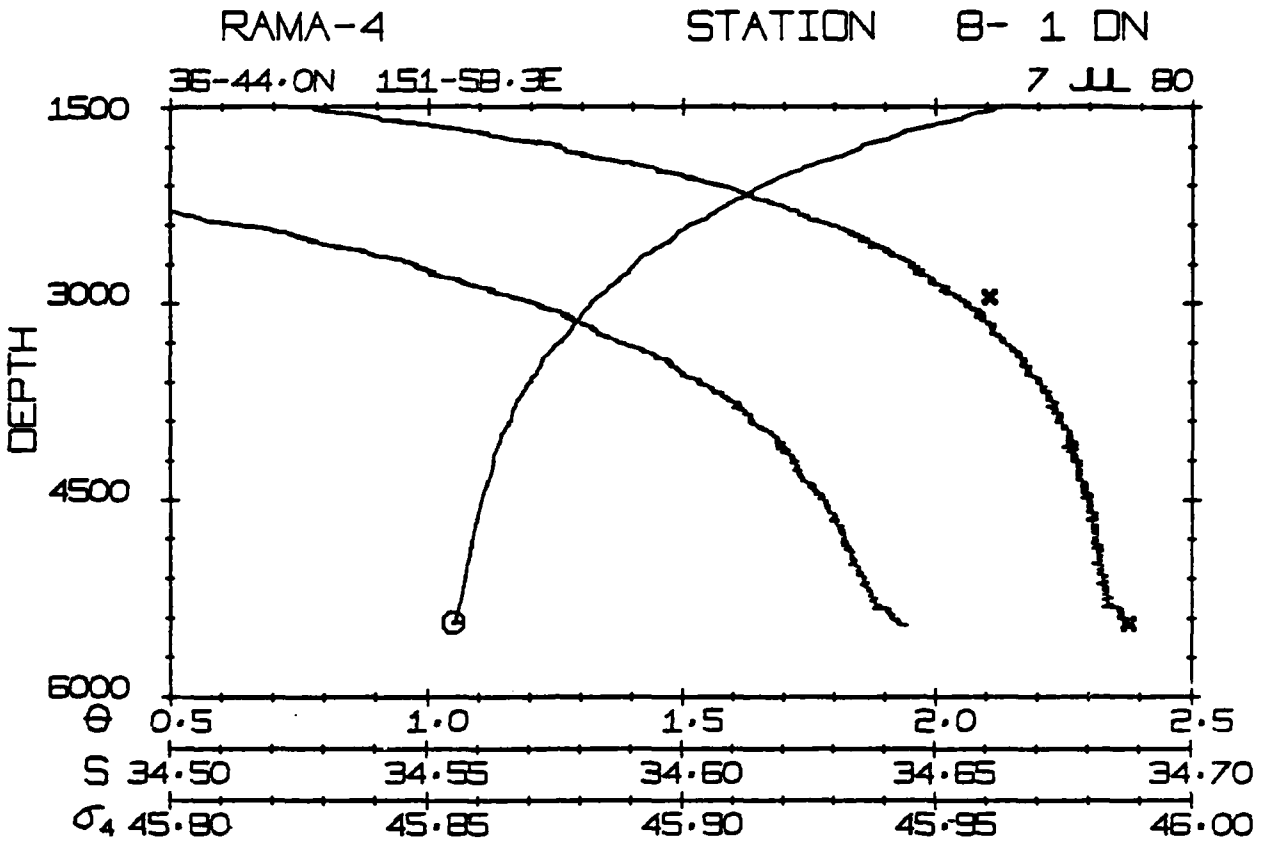
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3000
4500
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DEPTH
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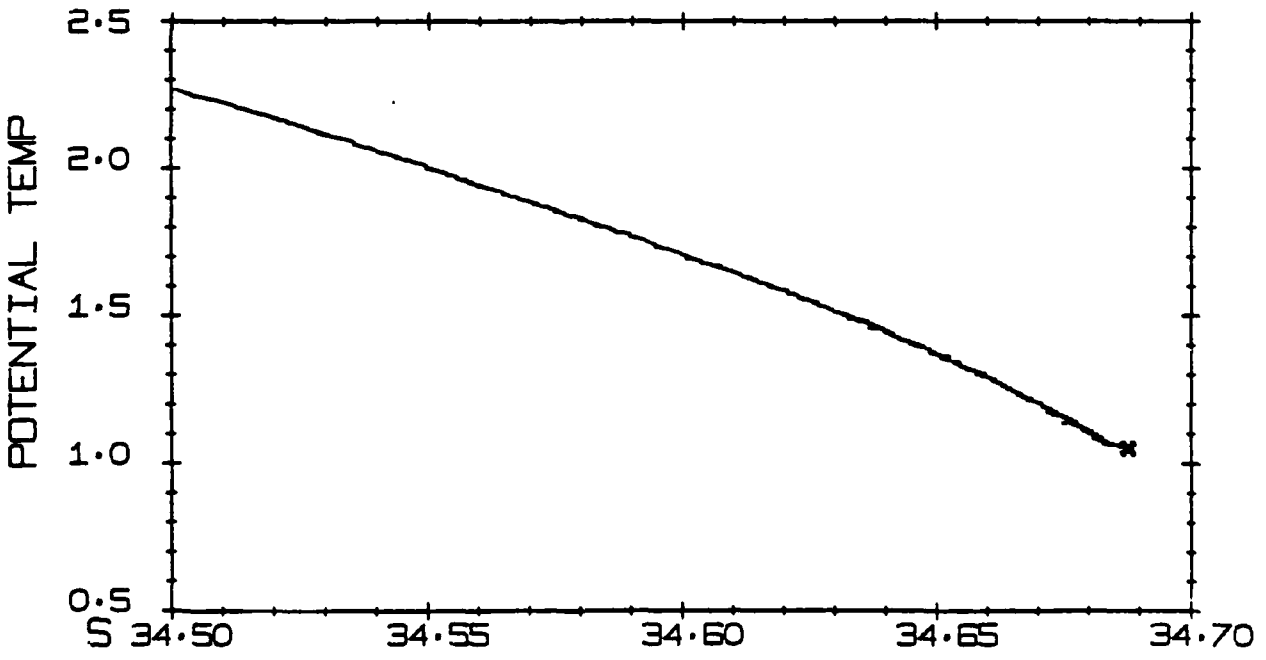
σ4 45.80 45.85 45.90 45.95 46.00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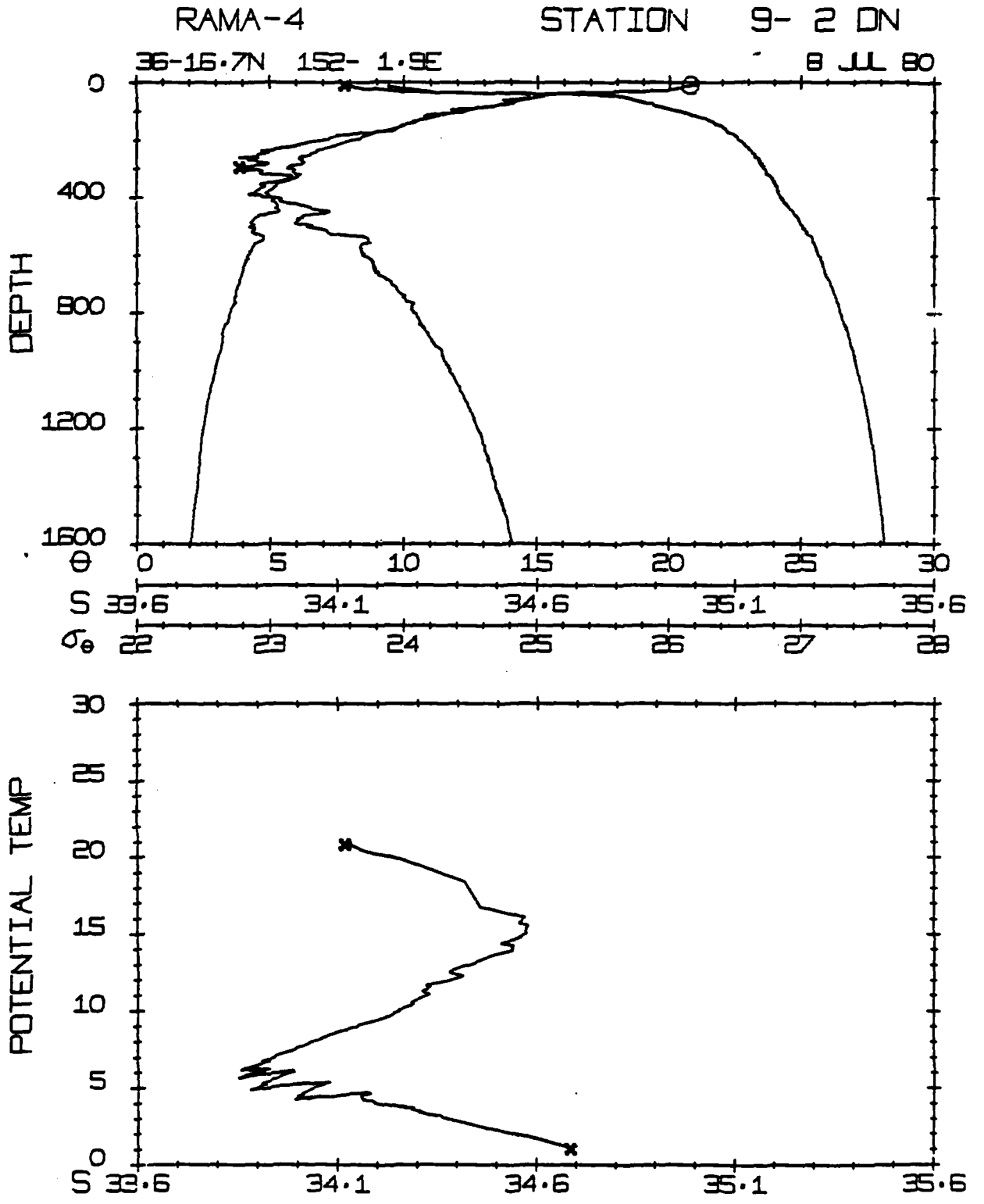
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1600
θ
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33.6
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35.1
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σθ
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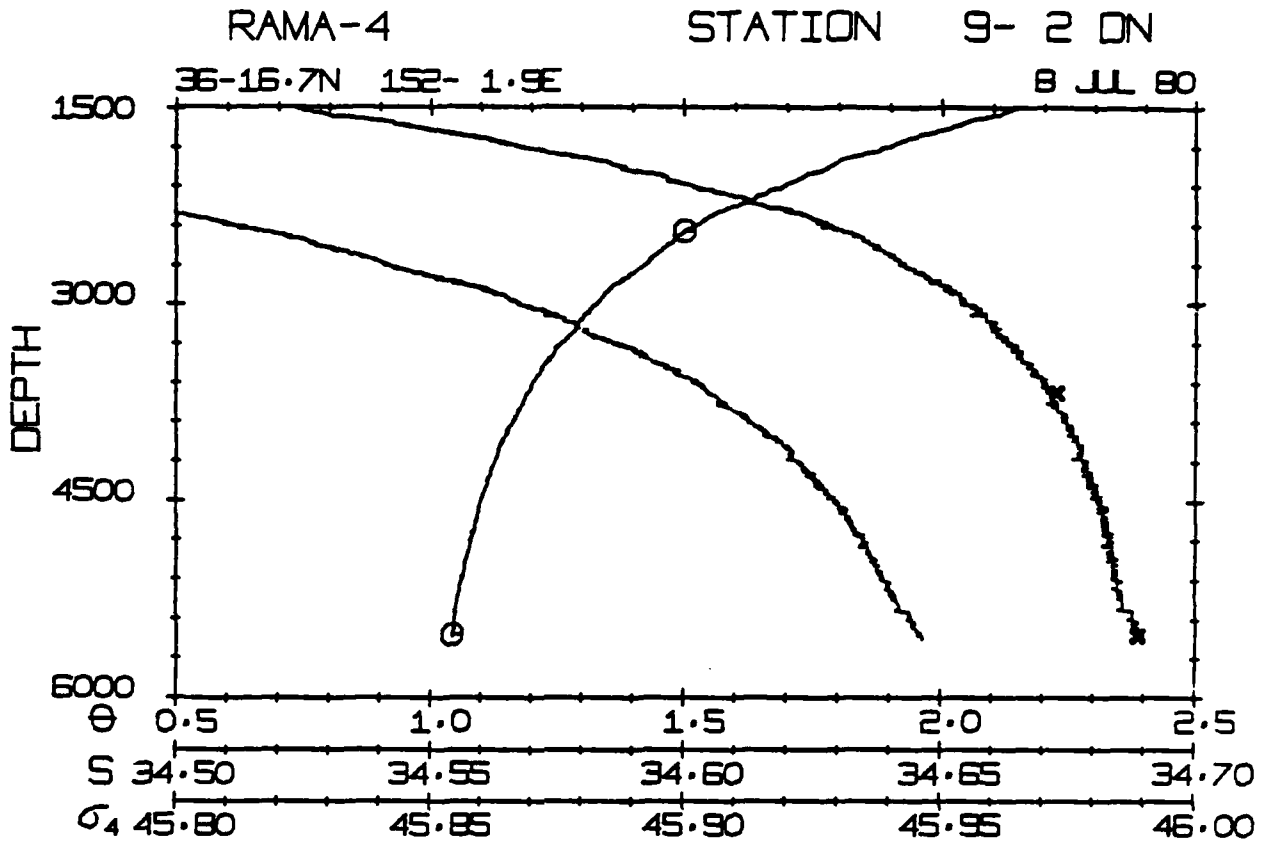
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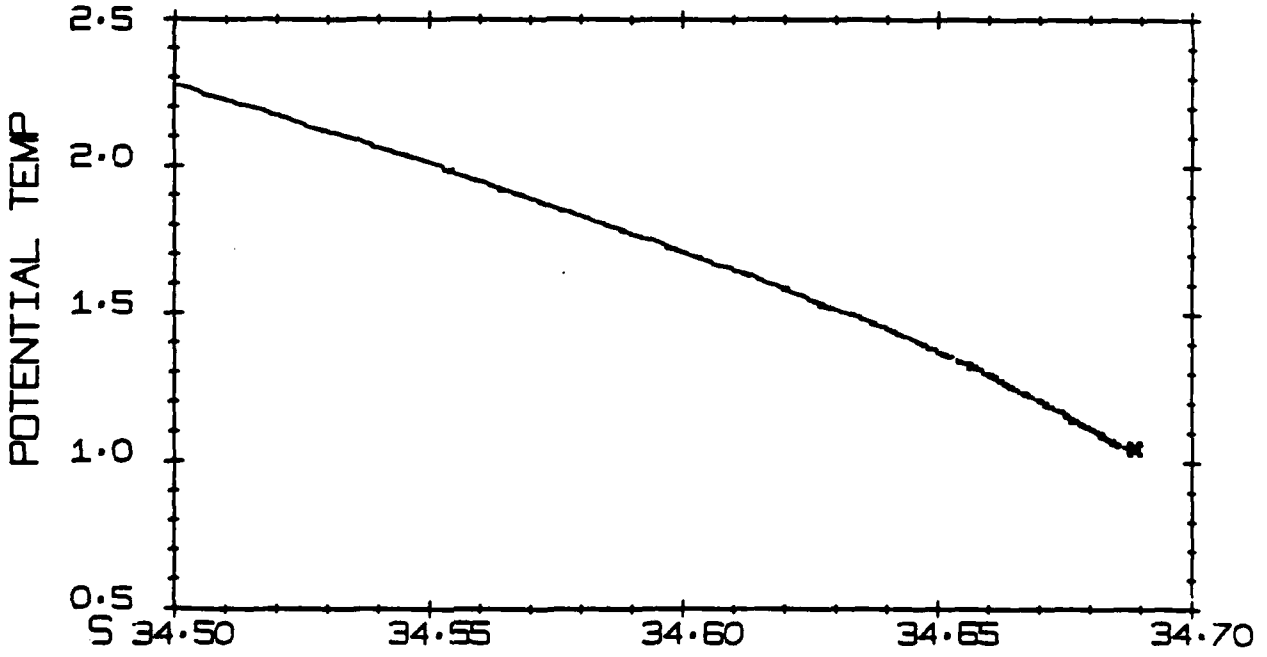
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1.5
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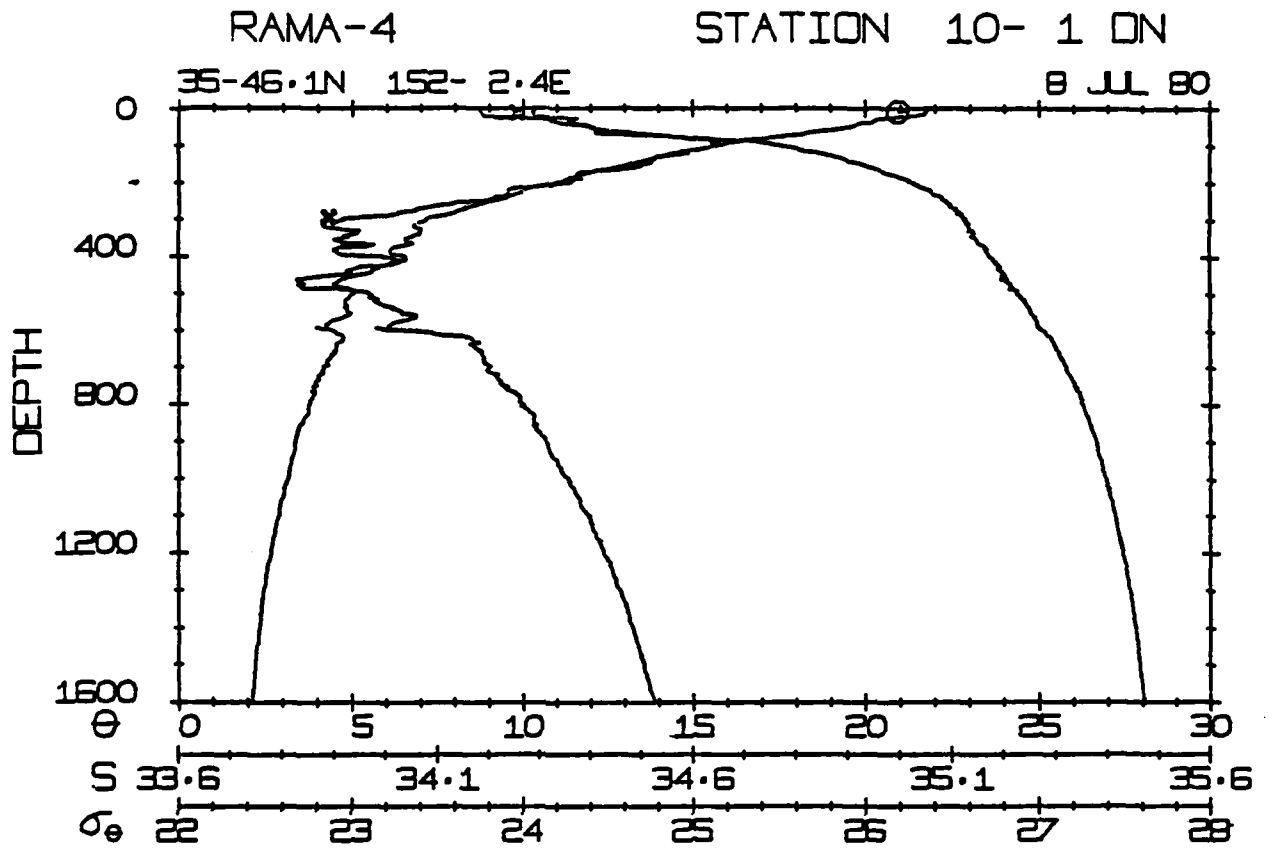
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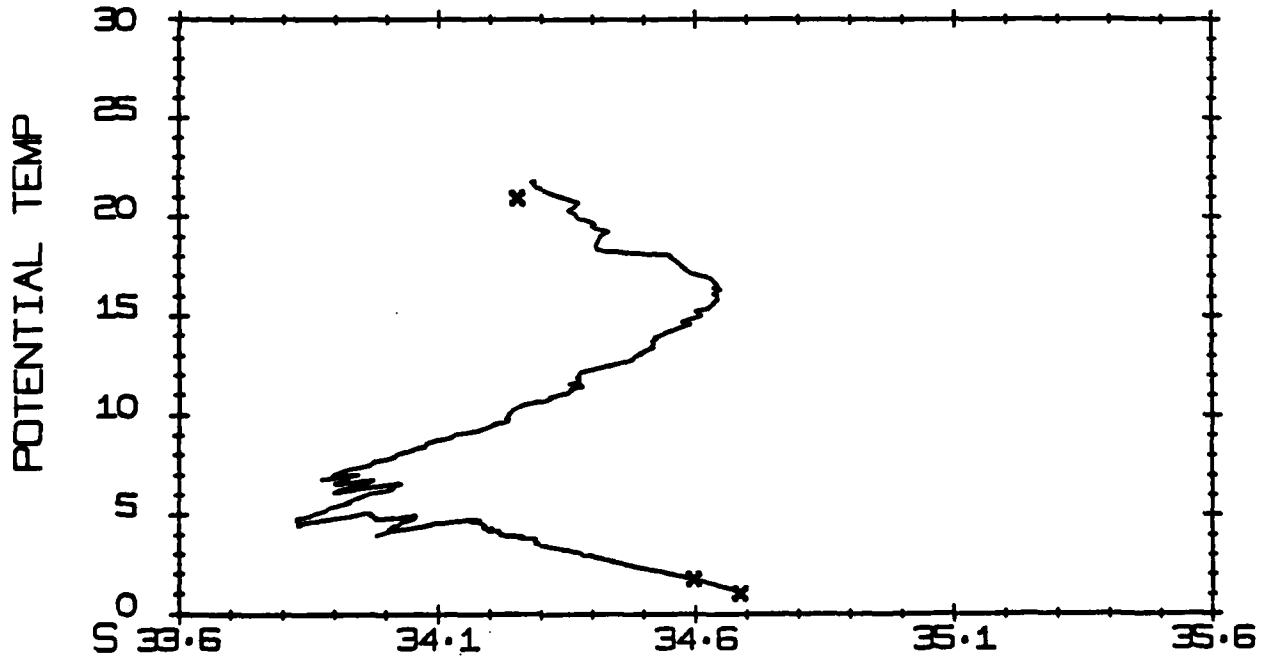
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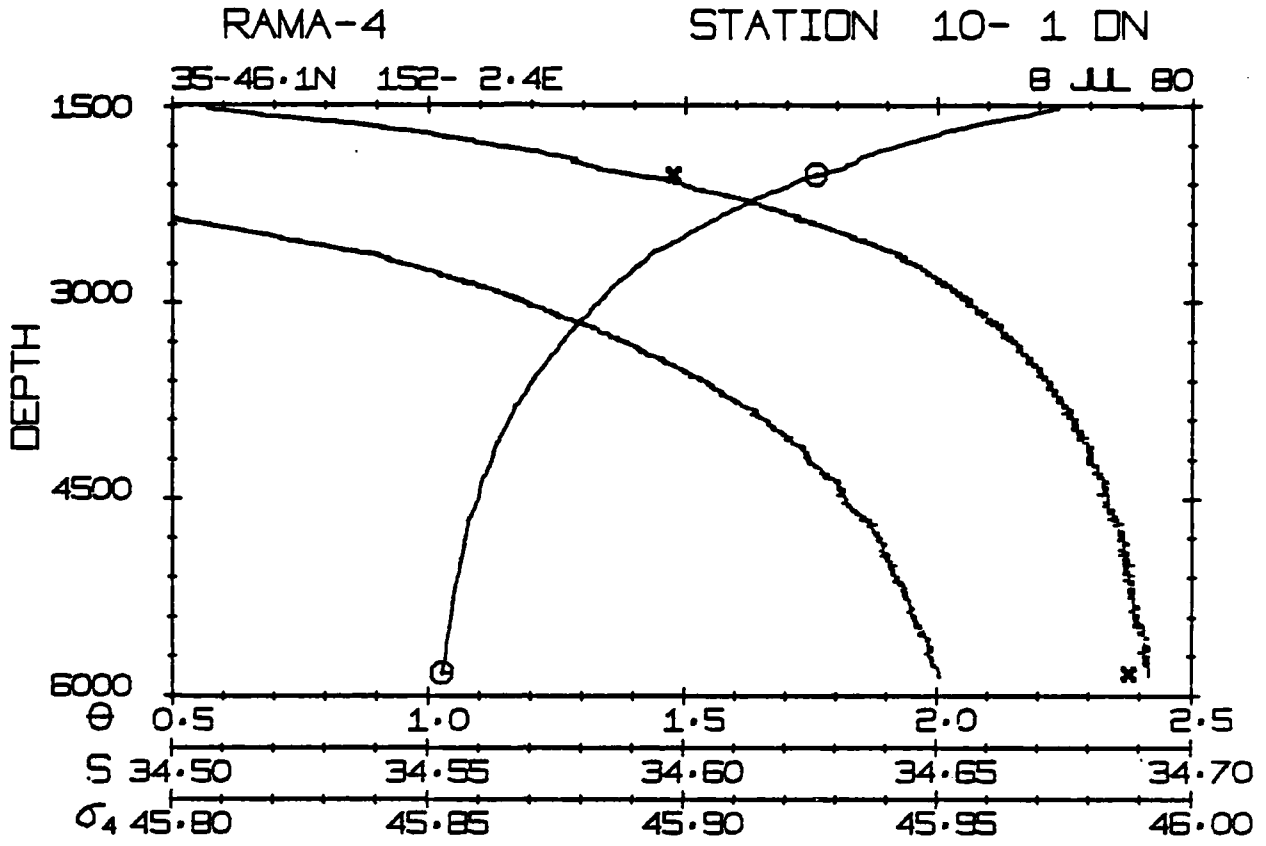
35.6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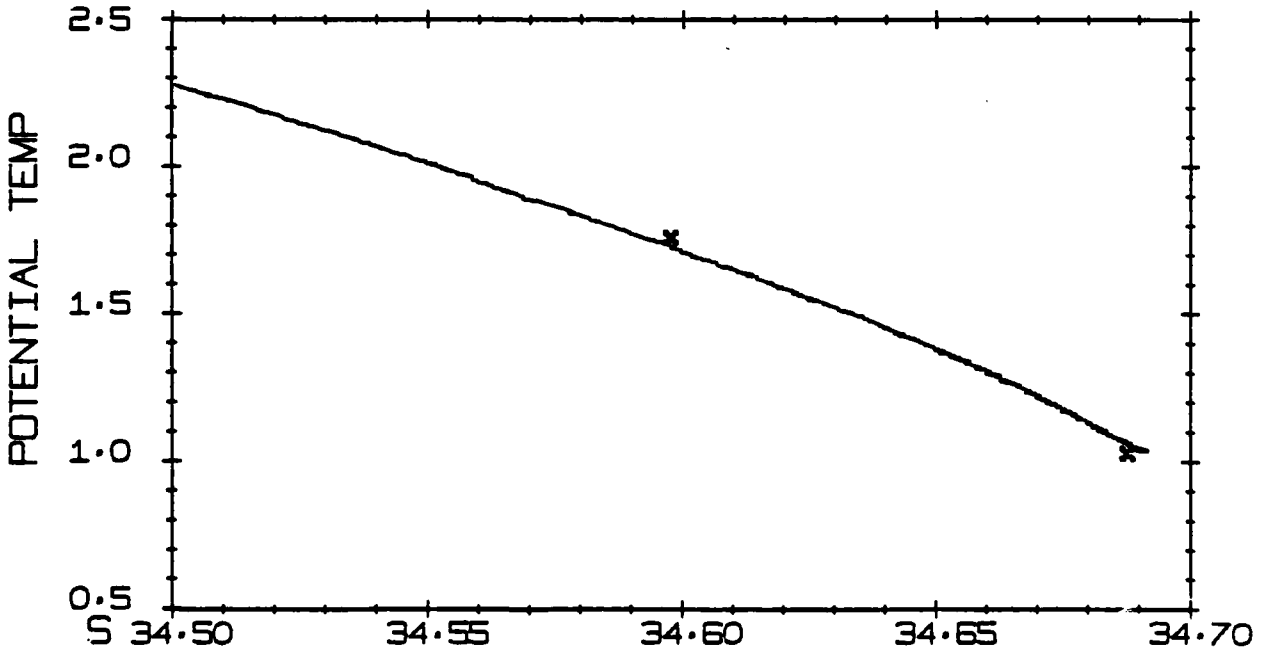
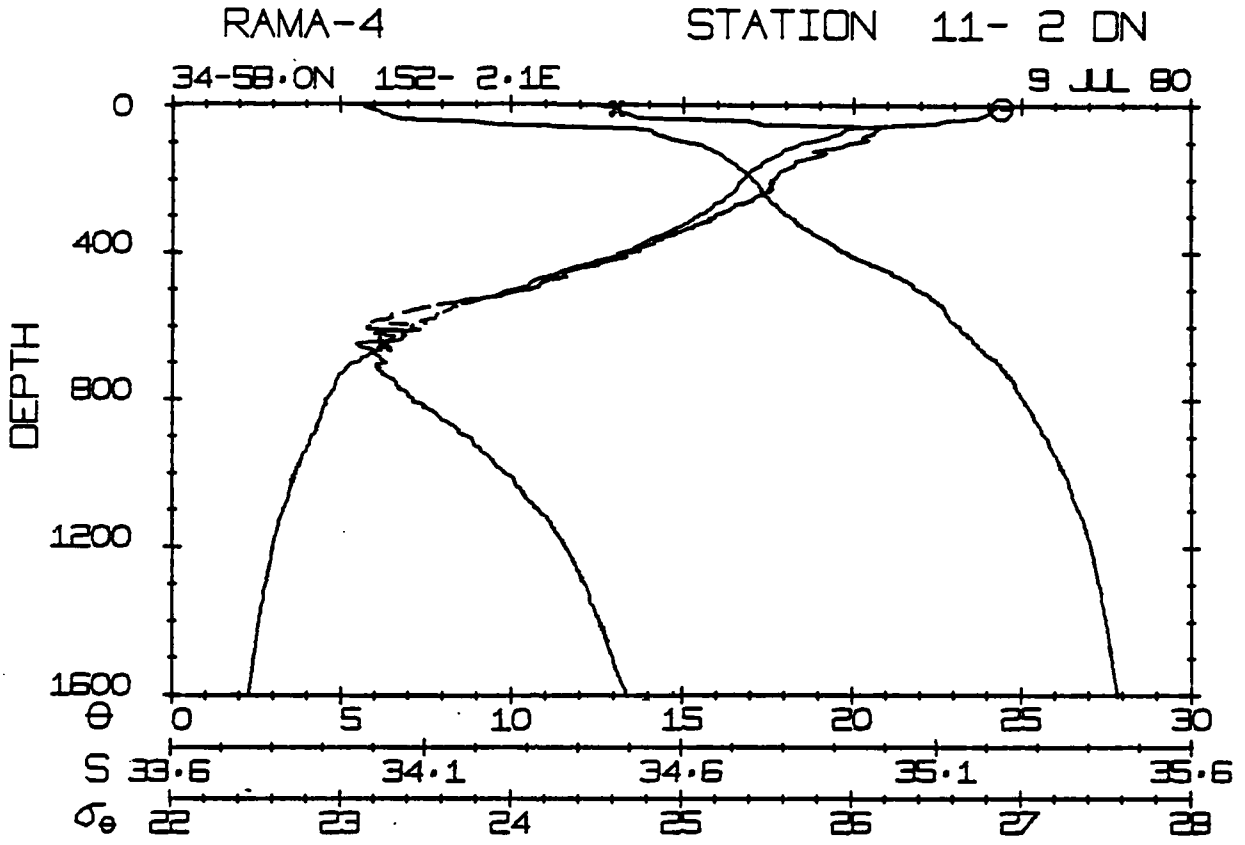
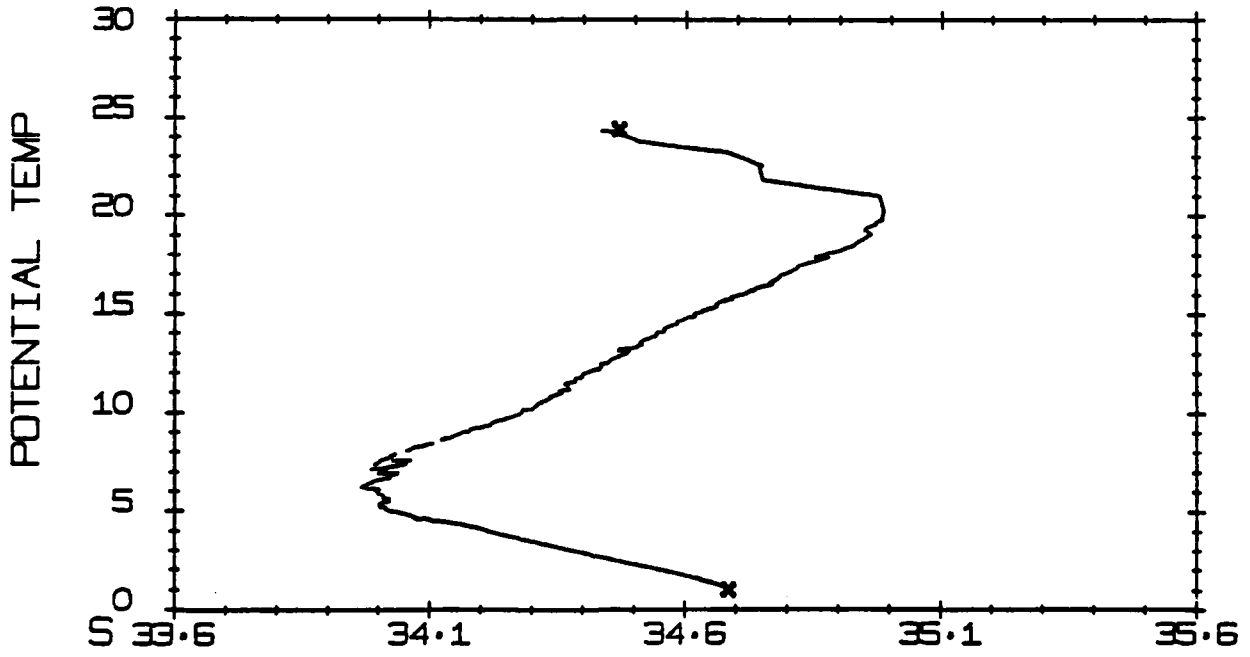
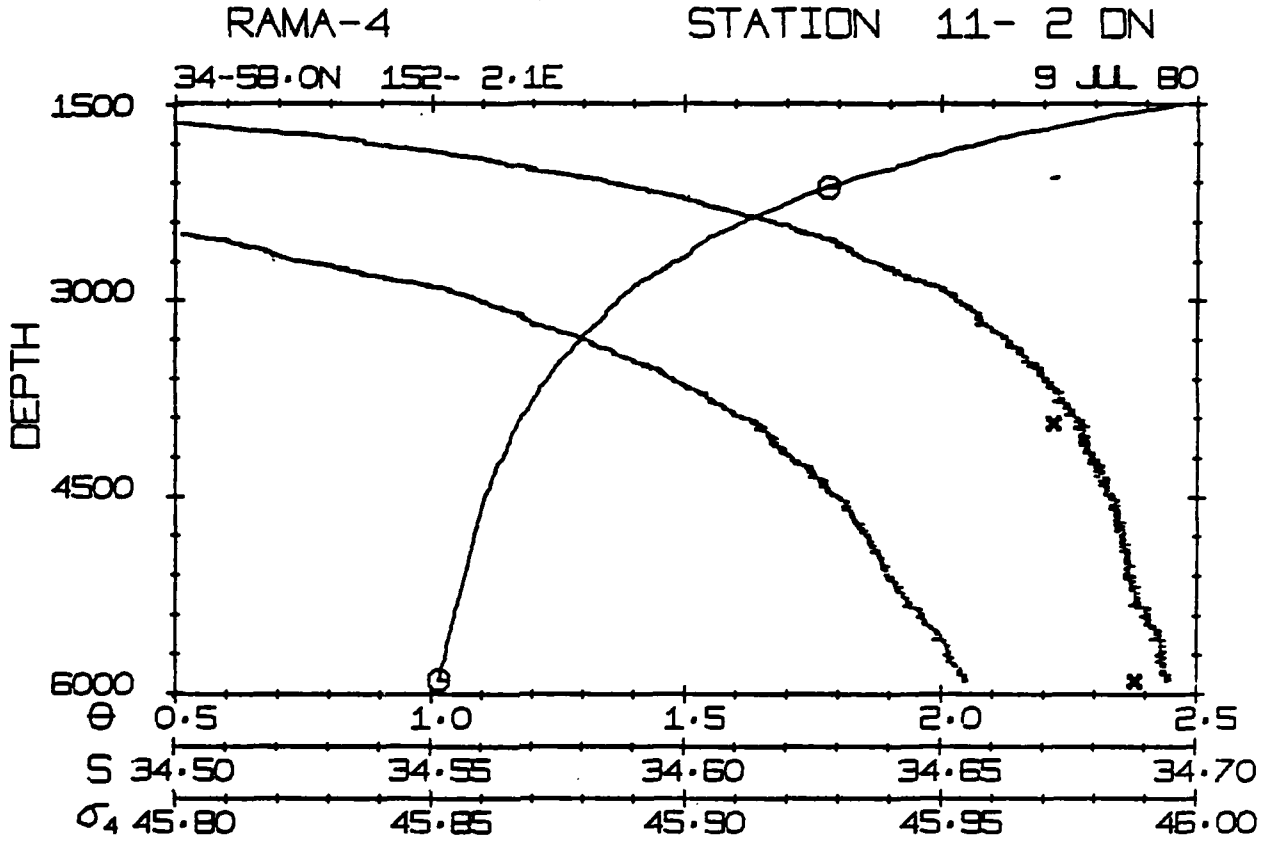
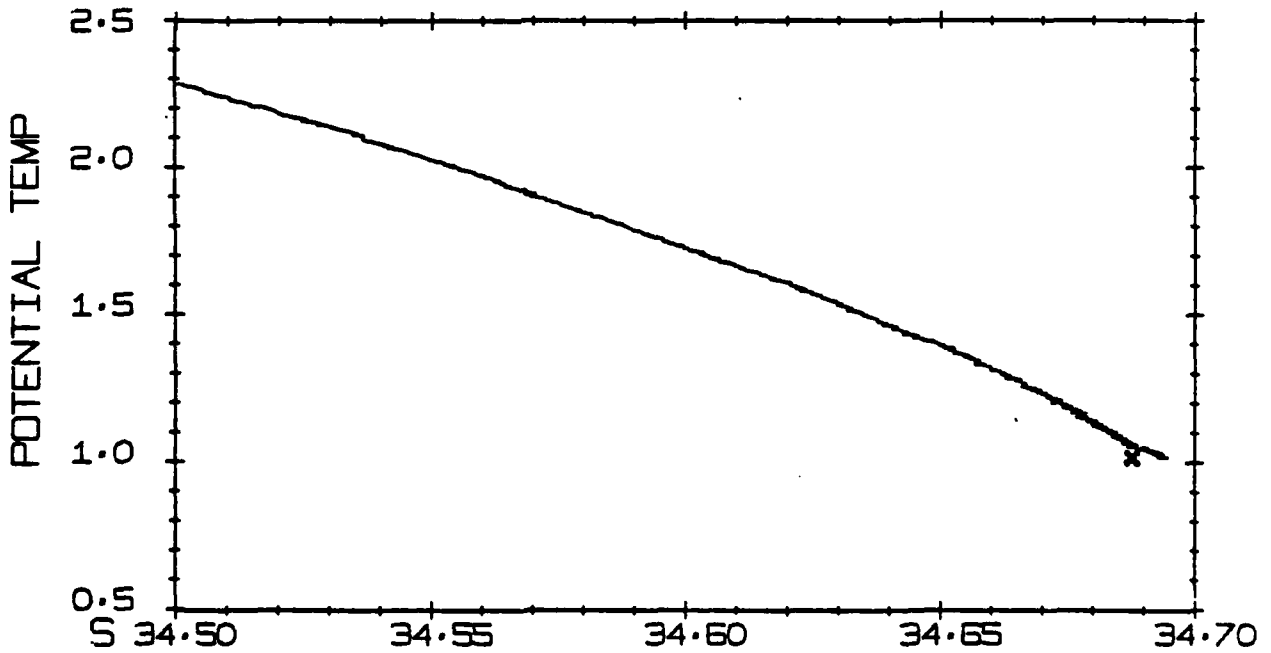
STATION 10- 1 DN
35-46.1N 152- 2.4E
8 JUL 80
DEPTH
1500
3000
4500
6000
θ 0.5 1.0 1.5 2.0 2.5
S 34.50 34.55 34.60 34.65 34.70
σ4 45.80 45.85 45.90 45.95 46.00

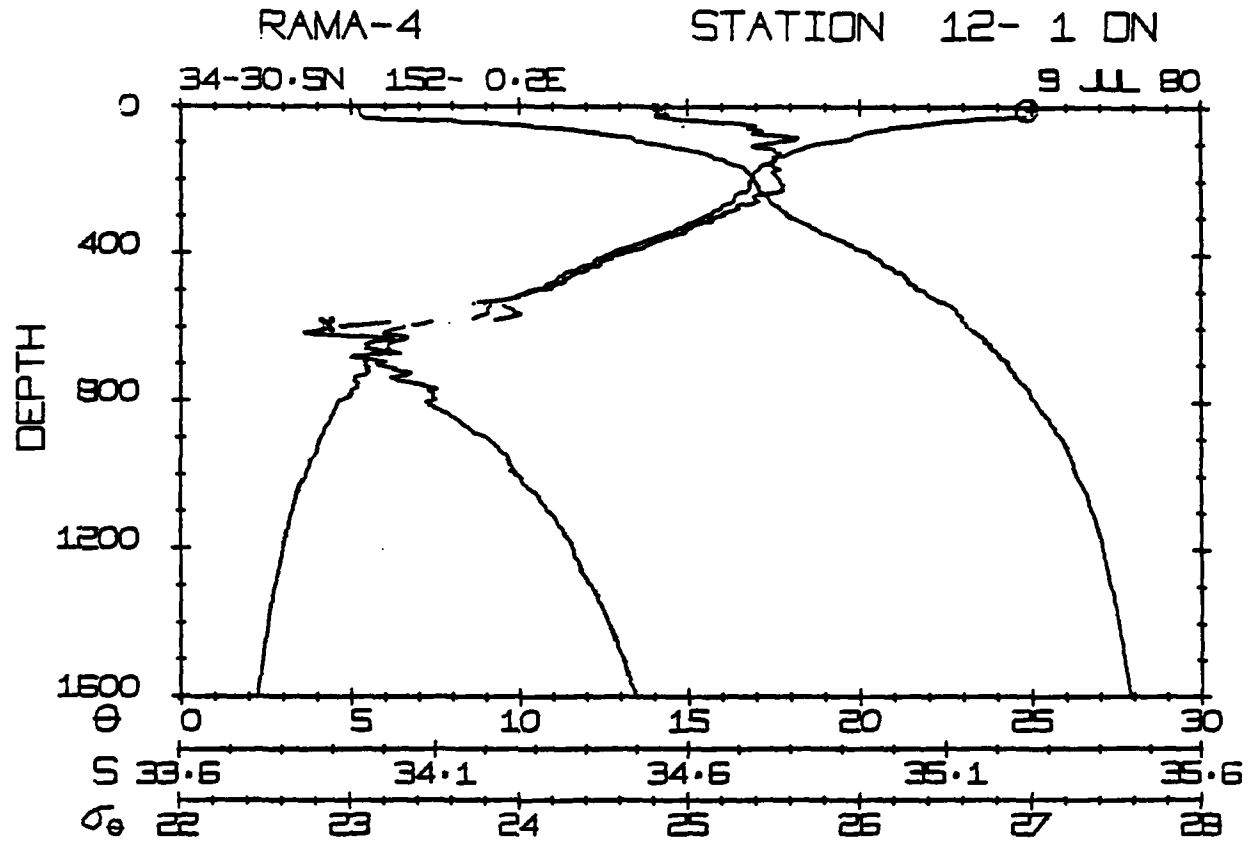

POTENTIAL TEMP
2.5
2.0
1.5
1.0
0.5
S 34.50 34.55 34.60 34.65 34.70

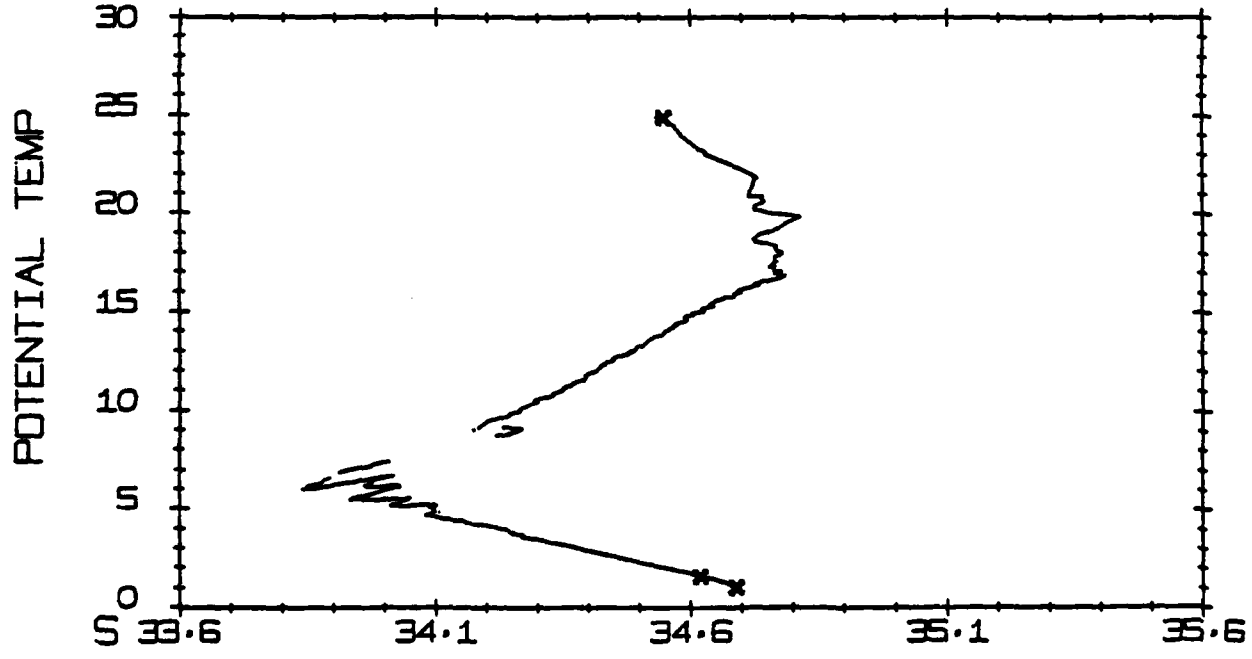

RAMA-4
STATION 11- 2 DN
34-58.0N 152- 2.1E
9 JUL 80
DEPTH
0
400
800
1200
1600
θ
0 5 10 15 20 25 30
S
33.6 34.1 34.6 35.1 35.6
σθ
22 23 24 25 26 27 28


POTENTIAL TEMP
30
25
20
15
10
5
0
S
33.6 34.1 34.6 35.1 35.6


RAMA-4
STATION 11- 2 DN
34-58·0N 152- 2·1E
9 JUL 80
1500
3000
4500
6000
DEPTH
θ 0·5 1·0 1·5 2·0 2·5
S 34·50 34·55 34·60 34·65 34·70
σ4 45·80 45·85 45·90 45·95 46·00


POTENTIAL TEMP
2·5
2·0
1·5
1·0
0·5
S 34·50 34·55 34·60 34·65 34·70


RAMA-4
STATION 12- 1 DN
34-30.9N 152- 0.2E
9 JUL 80
DEPTH
0
400
800
1200
1600
θ
0
5
10
15
20
25
30
S
33.6
34.1
34.6
35.1
35.6
σθ
22
23
24
25
26
27
28


POTENTIAL TEMP
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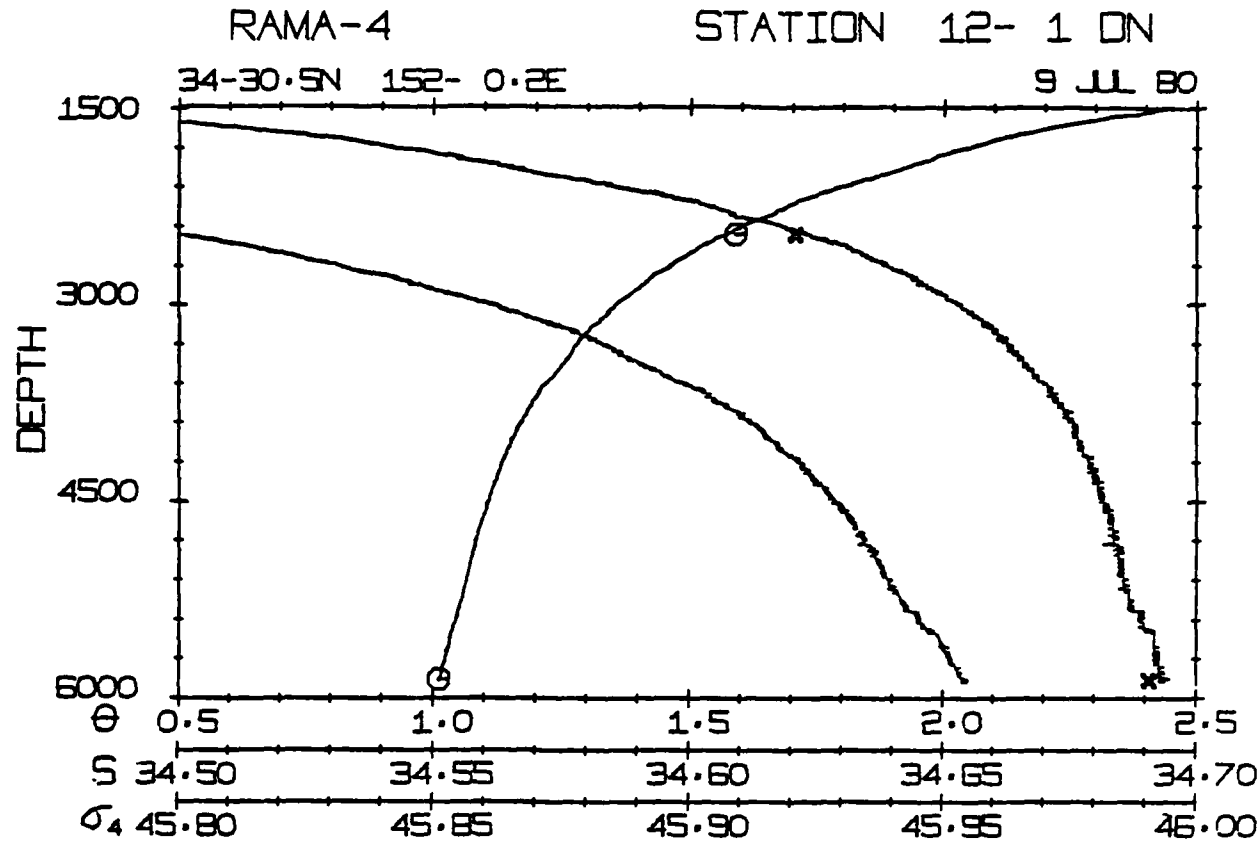
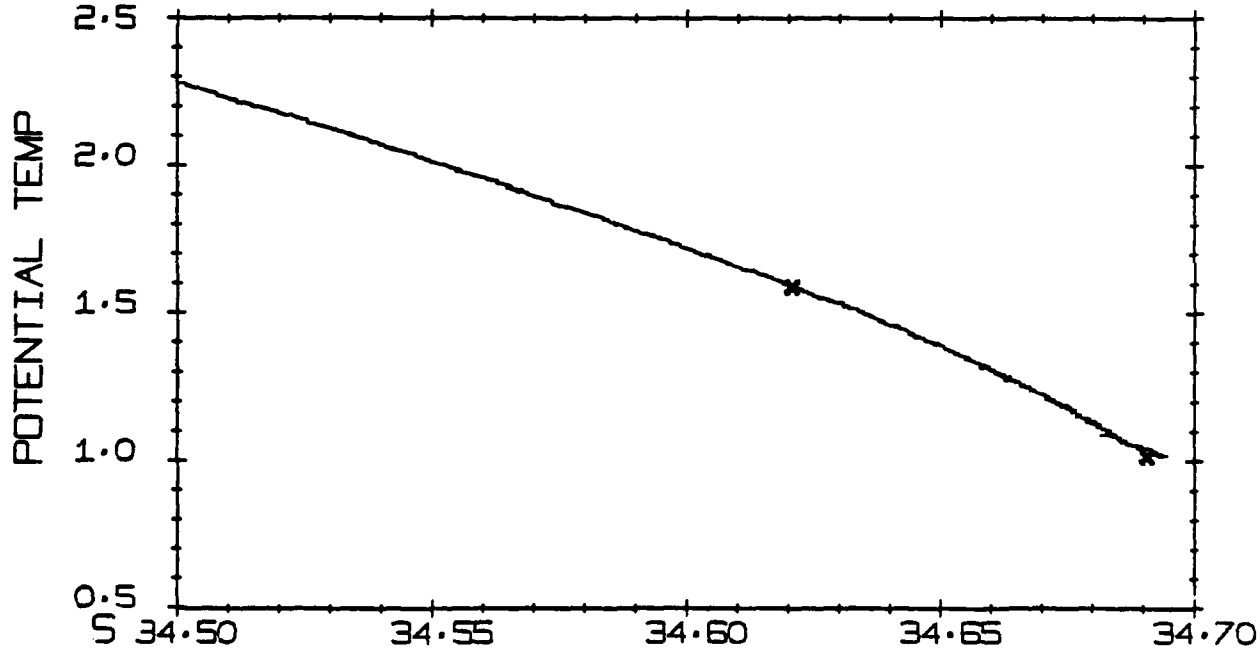
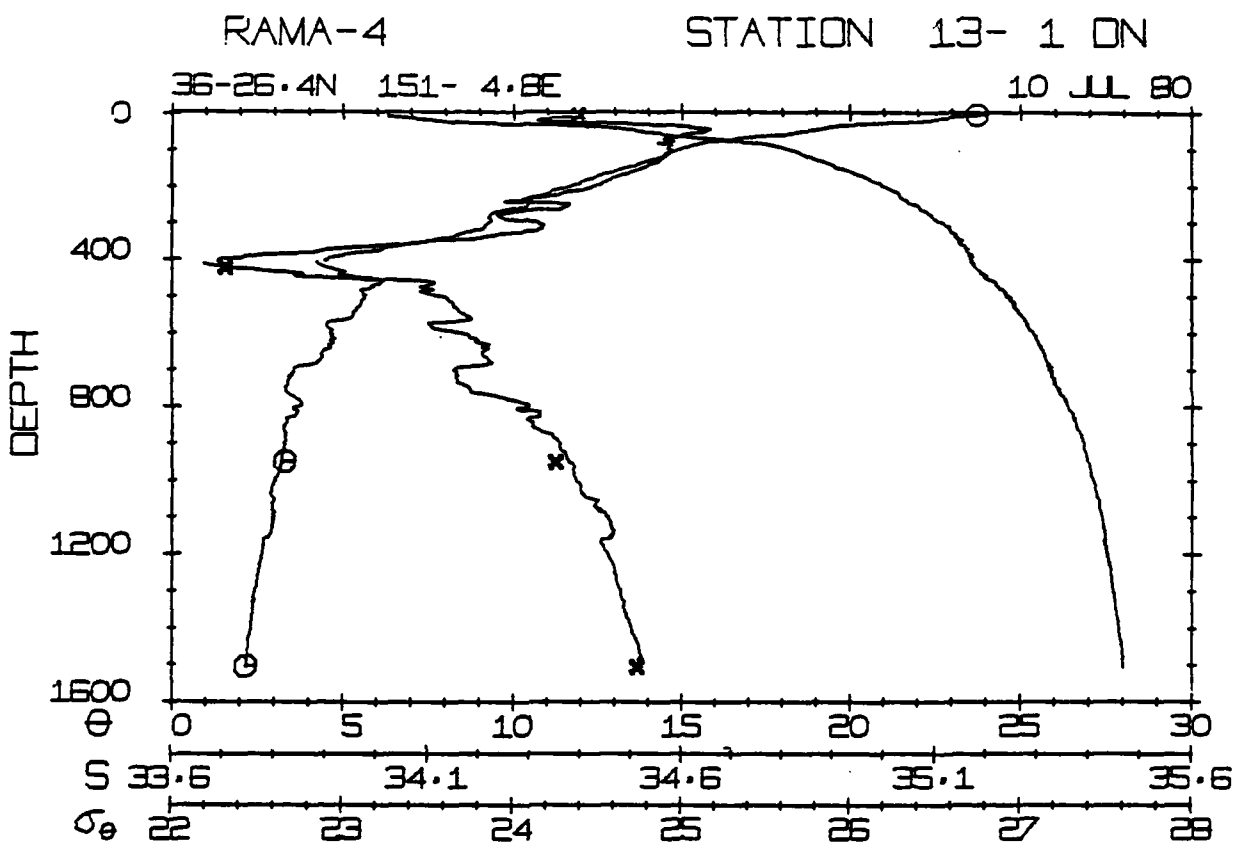
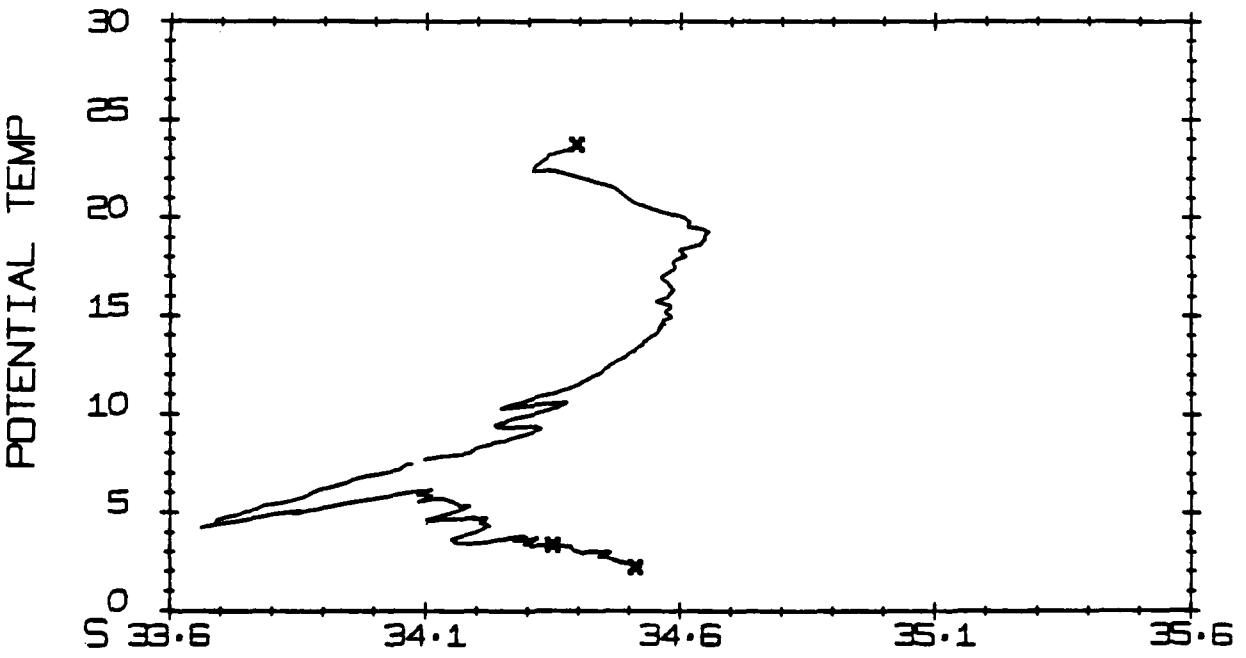
25
20
15
10
5
0
S
33.6
34.1
34.6
35.1
35.6


RAMA-4
STATION 12- 1 DN
34-30.5N 152- 0.2E
9 JUL 80
DEPTH
1500
3000
4500
6000
θ 0.5 1.0 1.5 2.0 2.5
S 34.50 34.55 34.60 34.65 34.70
σ4 45.80 45.85 45.90 45.95 46.00


POTENTIAL TEMP
2.5
2.0
1.5
1.0
0.5
S 34.50 34.55 34.60 34.65 34.70


RAMA-4
STATION 13- 1 DN
36-26.4N 151- 4.8E
10 JUL 80
DEPTH
0
400
800
1200
1600
θ
0 5 10 15 20 25 30
S
33.6 34.1 34.6 35.1 35.6
σθ
22 23 24 25 26 27 28


POTENTIAL TEMP
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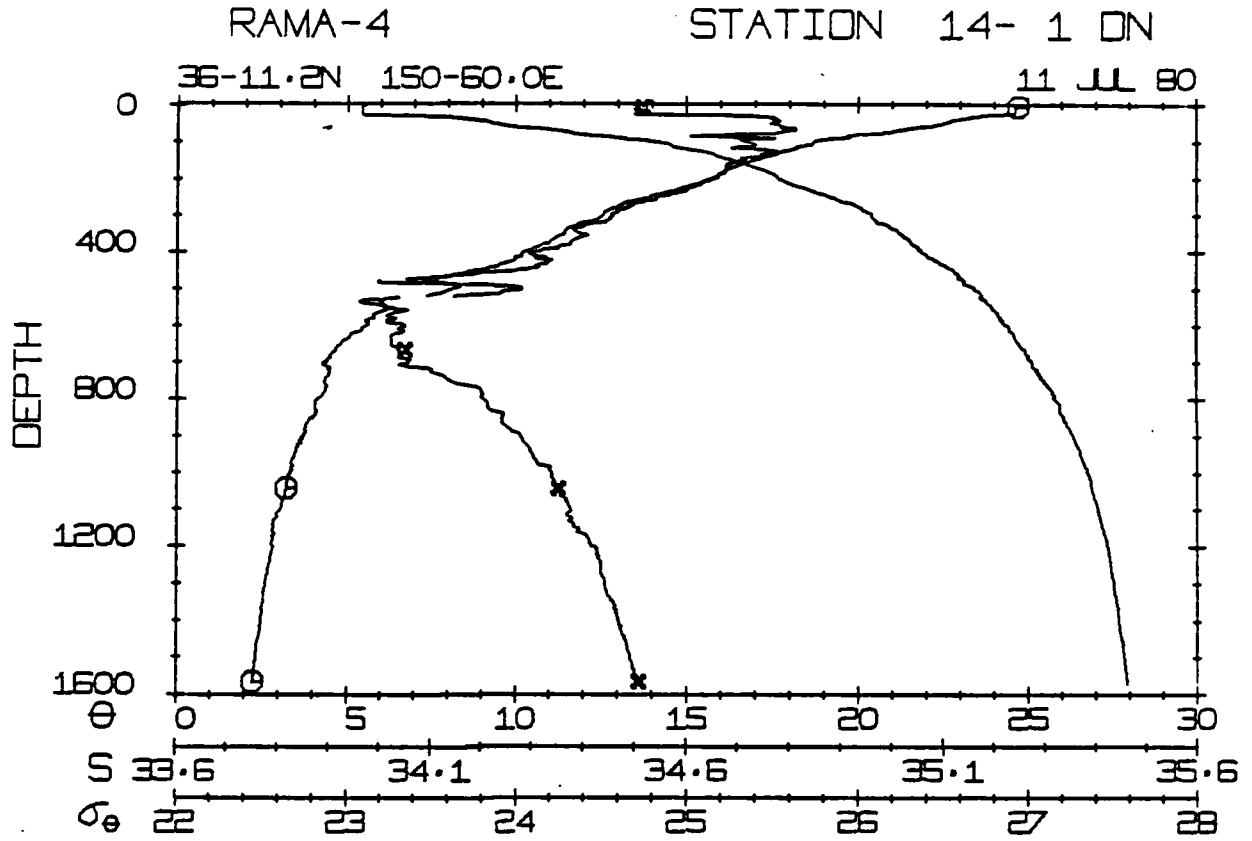
25
20
15
10
5
0
S
33.6 34.1 34.6 35.1 35.6


RAMA-4
STATION 14- 1 DN
36-11.2N 150-60.0E
11 JUL 80
DEPTH
0
400
800
1200
1600
θ
0
5
10
15
20
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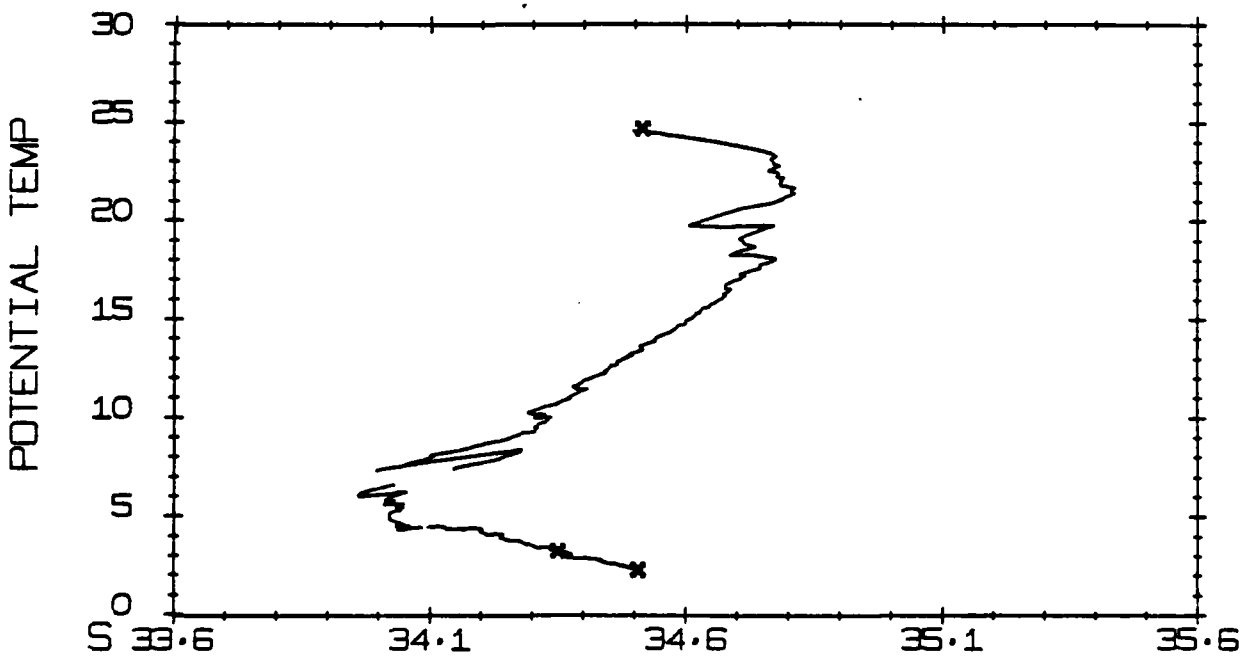
30
S
33.6
34.1
34.6
35.1
35.6
σθ
22
23
24
25
26
27
28


POTENTIAL TEMP
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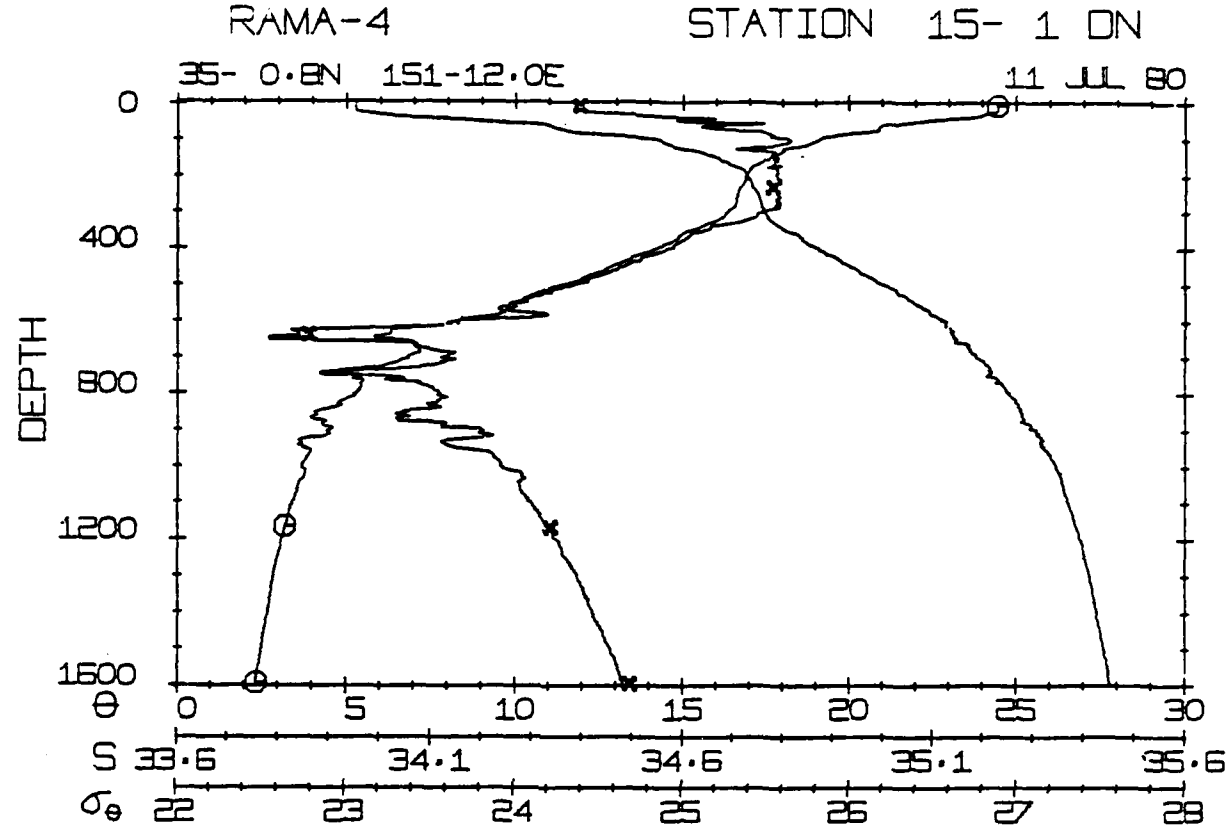
25
20
15
10
5
0
S
33.6
34.1
34.6
35.1
35.6


RAMA-4
STATION 15- 1 DN
35- 0.8N 151-12.0E
11 JUL 80
DEPTH
0
400
800
1200
1600
θ
0
5
10
15
20
25
30
S
33.6
34.1
34.6
35.1
35.6
σθ
22
23
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27
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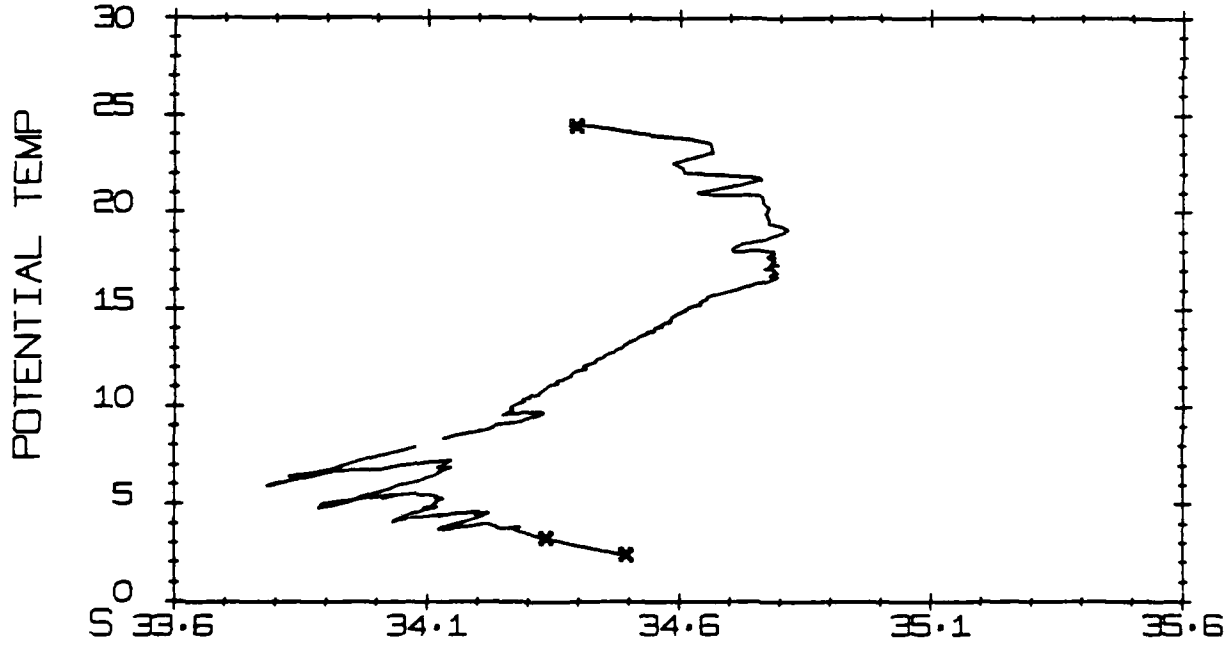
POTENTIAL TEMP
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25
20
15
10
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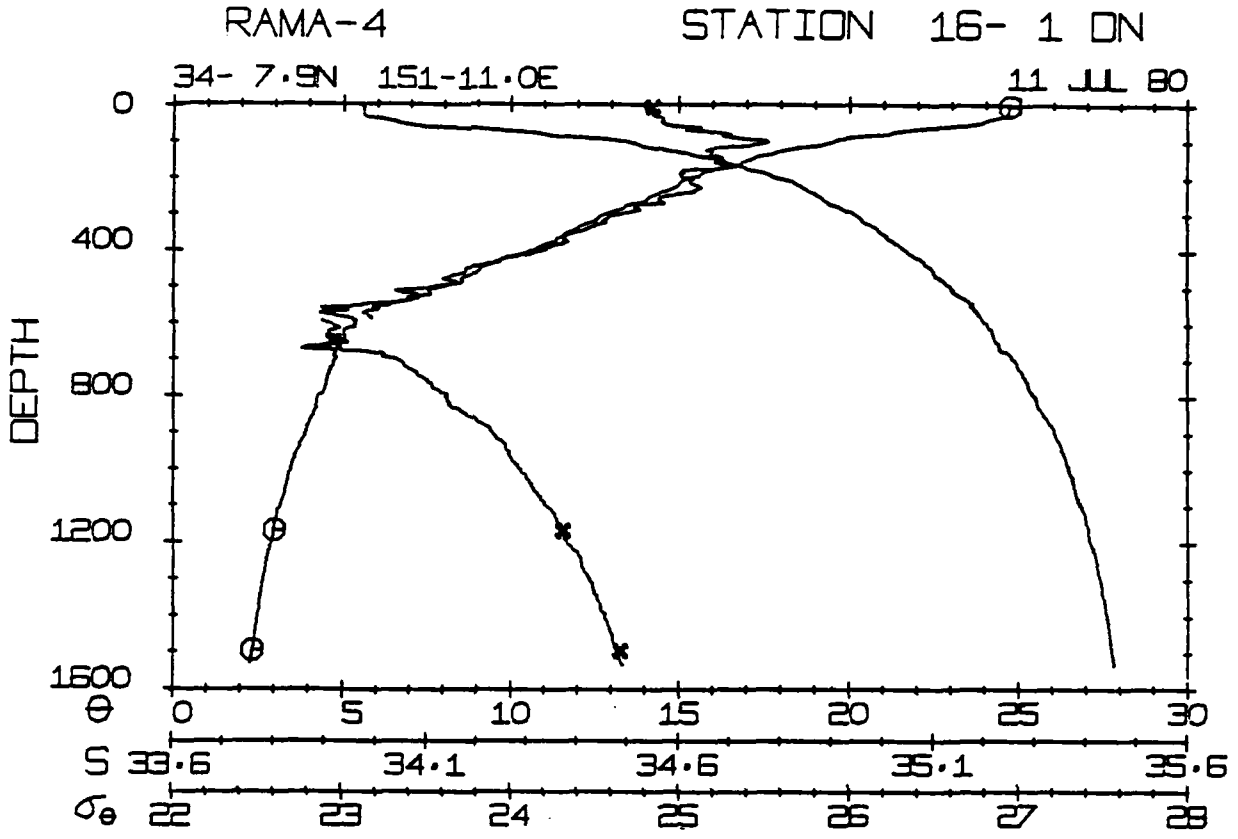
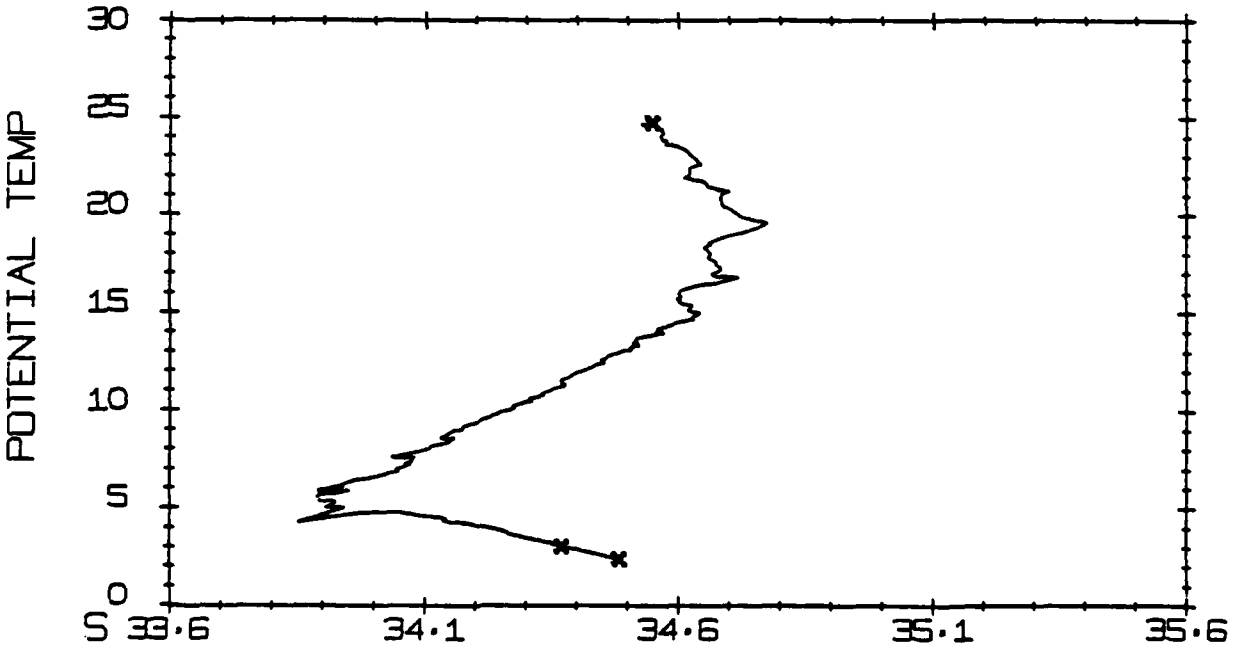
0
S
33.6
34.1
34.6
35.1
35.6


RAMA-4
STATION 16- 1 DN
34- 7.9N 151-11.0E
11 JUL 80
DEPTH
0
400
800
1200
1600
θ 0 5 10 15 20 25 30
S 33.6 34.1 34.6 35.1 35.6
σθ 22 23 24 25 26 27 28


POTENTIAL TEMP
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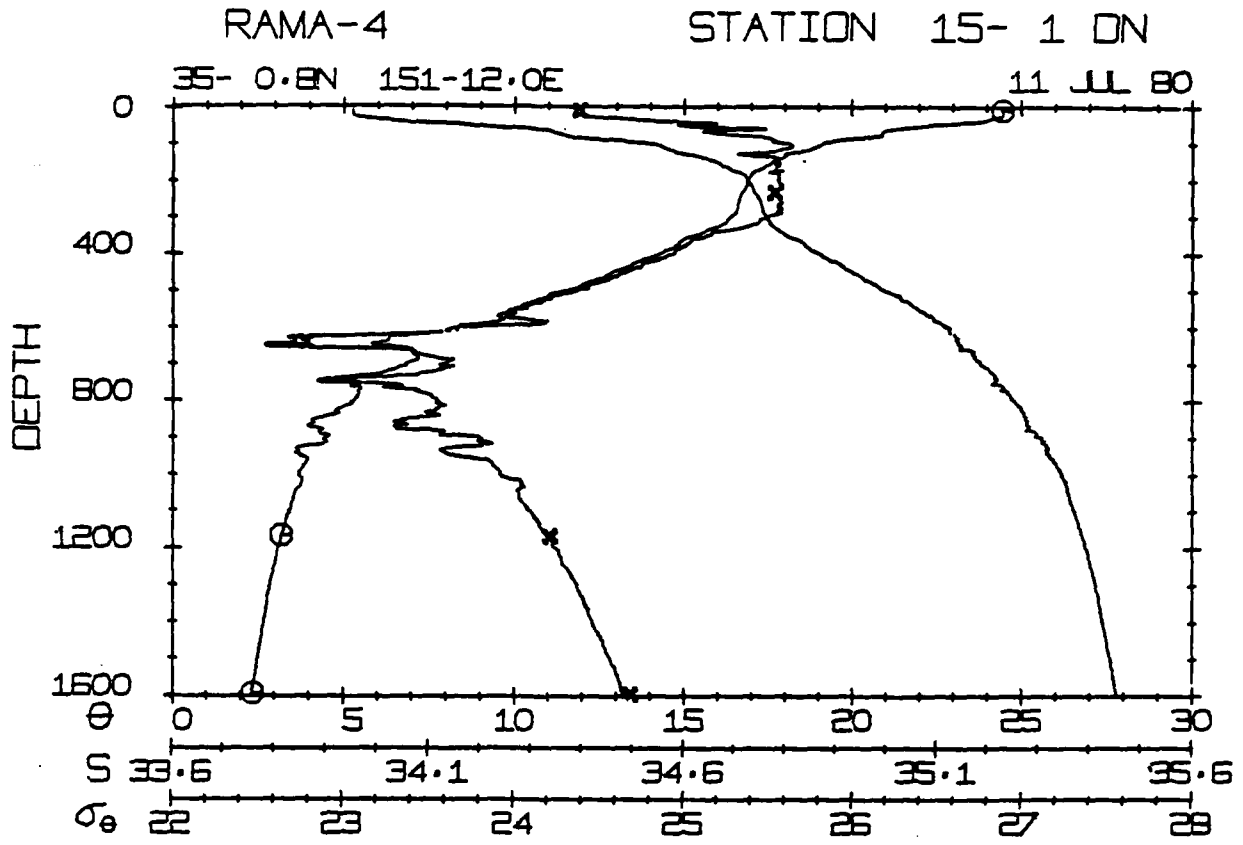
25
20
15
10
5
0
S 33.6 34.1 34.6 35.1 35.6


RAMA-4
STATION 15- 1 DN
35- 0.8N 151-12.0E
11 JUL 80
DEPTH
0
400
800
1200
1600
θ
0
5
10
15
20
25
30
S
33.6
34.1
34.6
35.1
35.6
σθ
22
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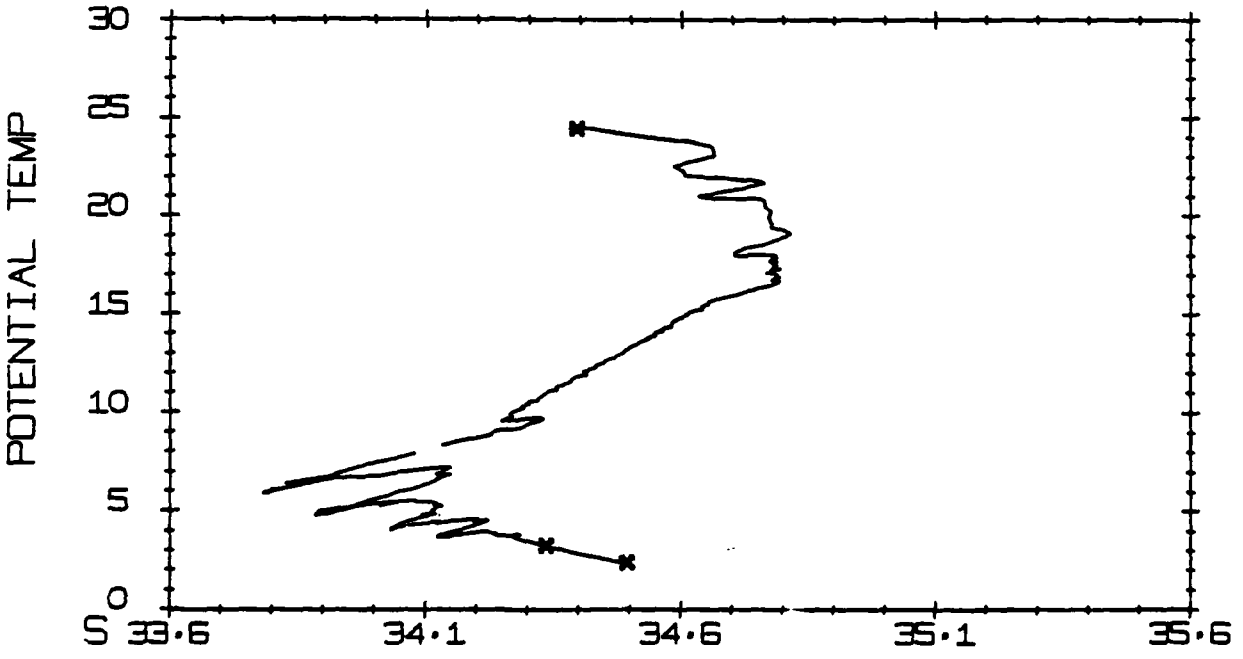
POTENTIAL TEMP
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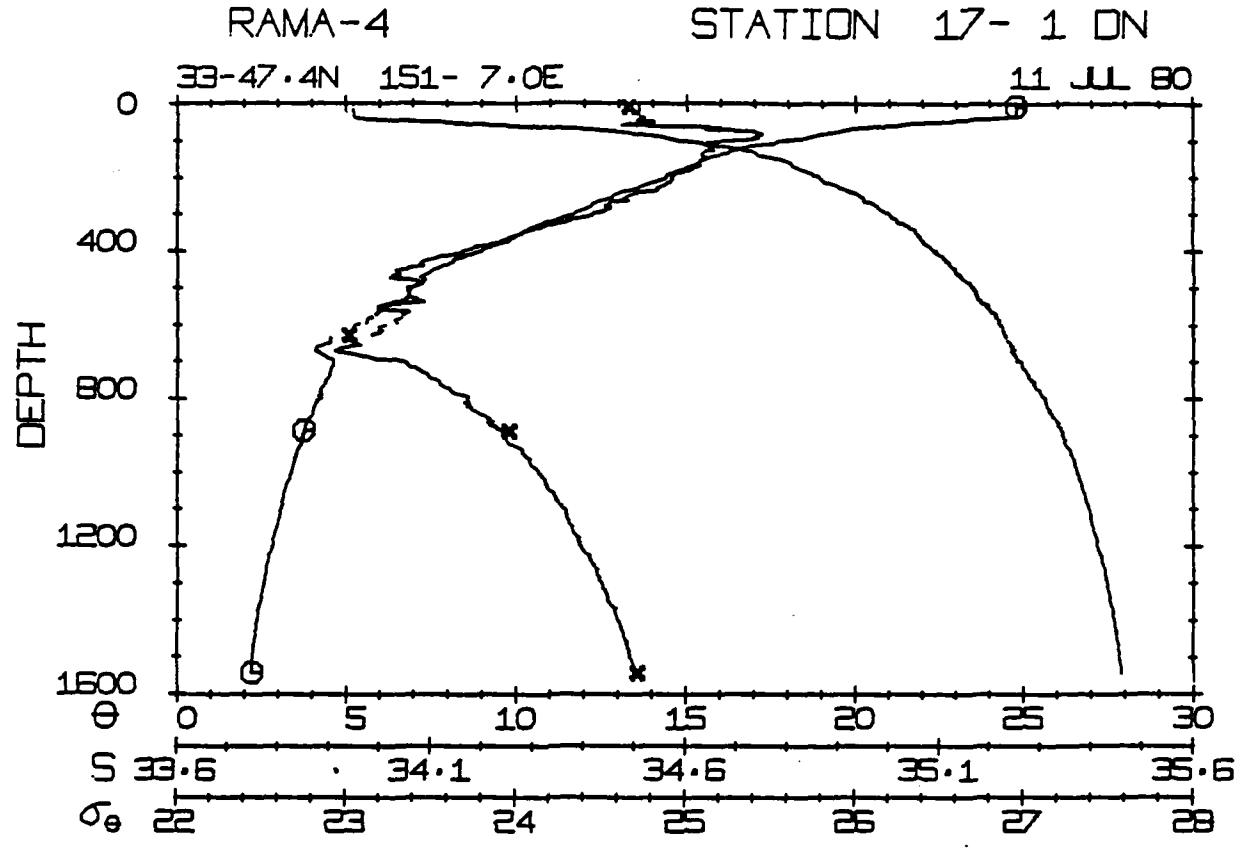
S
33.6
34.1
34.6
35.1
35.6


RAMA-4
STATION 17- 1 DN
33-47.4N 151- 7.0E
11 JUL 80
DEPTH
0
400
800
1200
1600
θ
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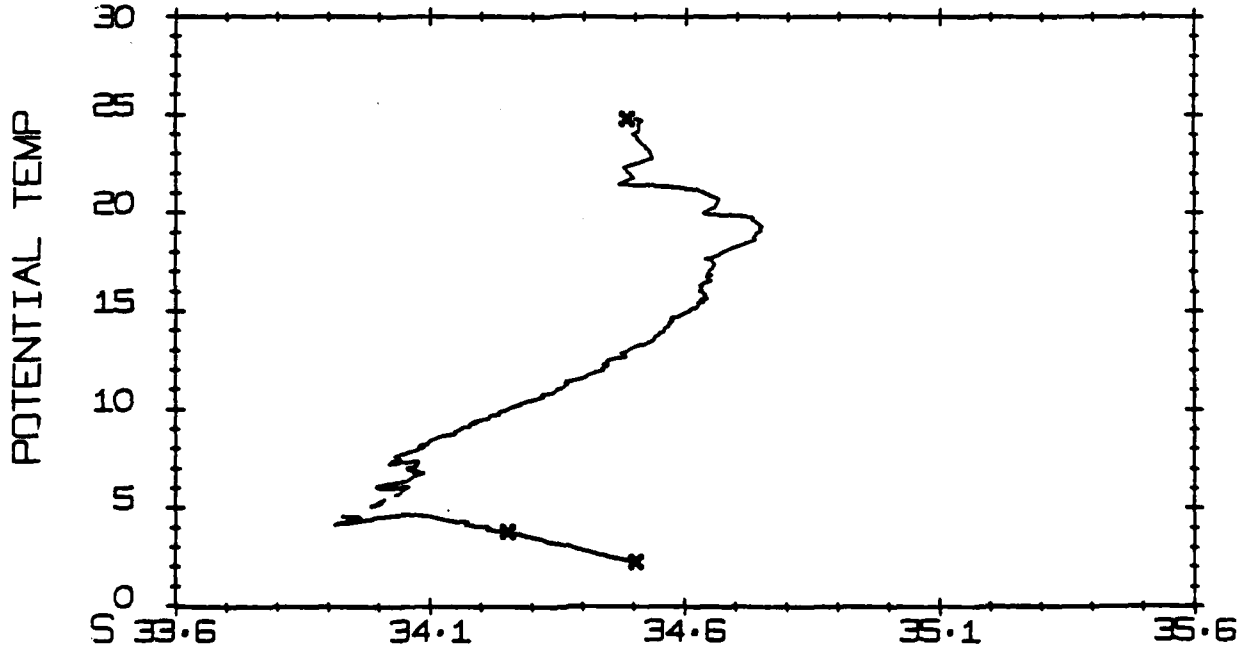
S
33.6 34.1 34.6 35.1 35.6
σθ
22 23 24 25 26 27 28


POTENTIAL TEMP
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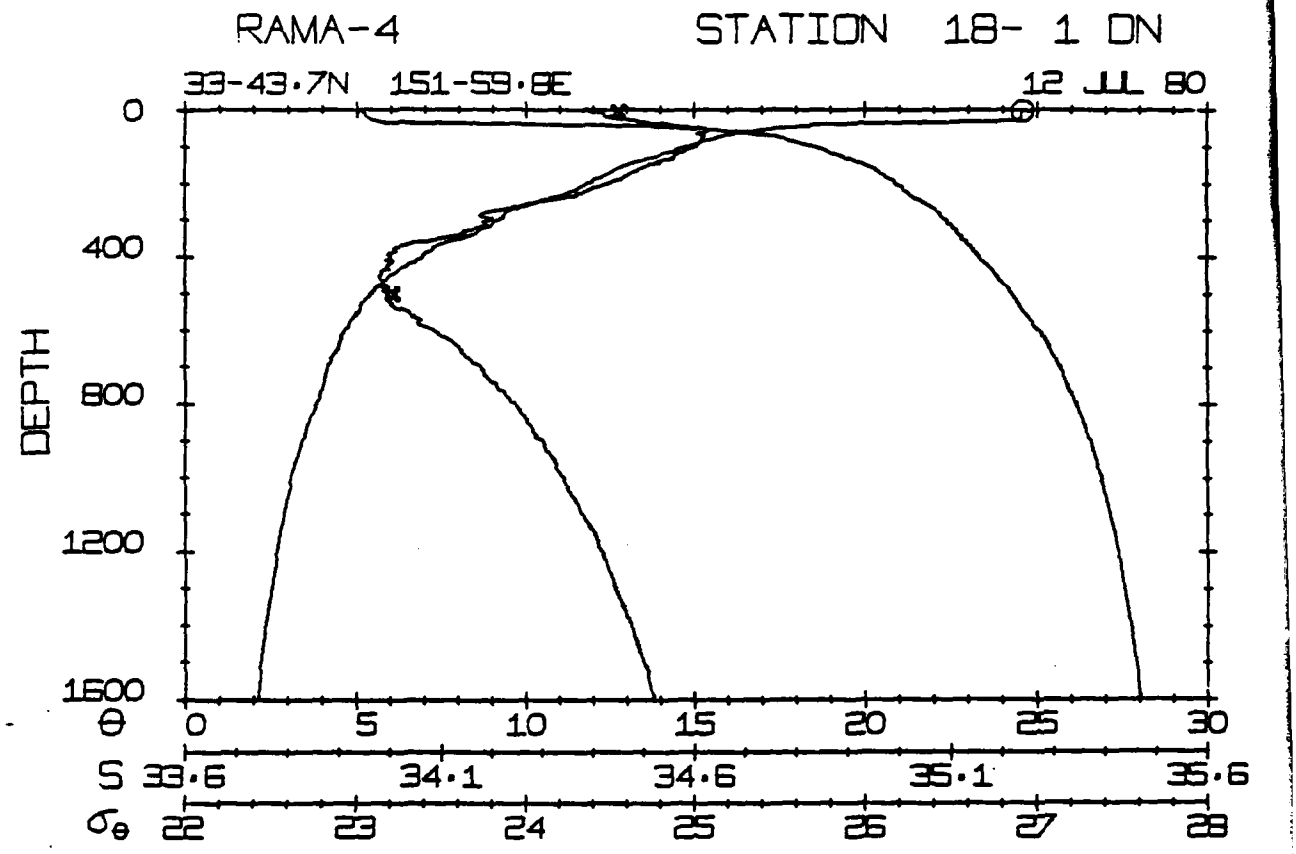
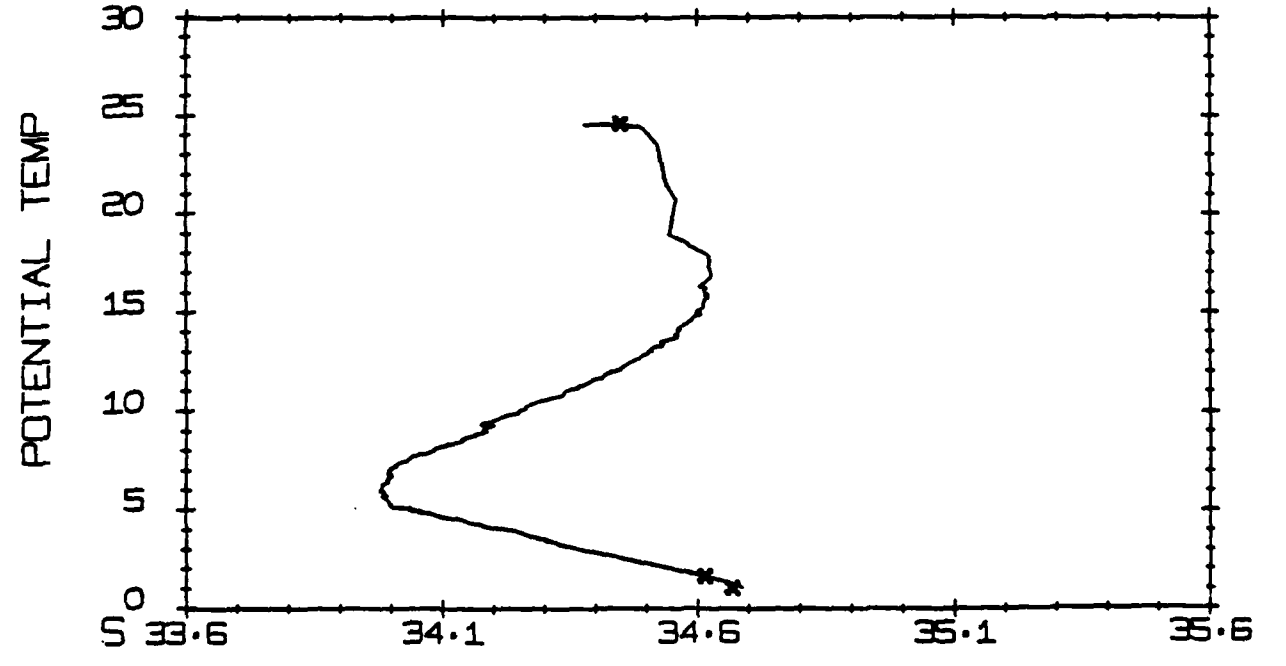
25
20
15
10
5
0
S
33.6 34.1 34.6 35.1 35.6


RAMA-4
STATION 18- 1 DN
33-43.7N 151-59.8E
12 JUL 80
DEPTH
0
400
800
1200
1600
θ 0 5 10 15 20 25 30
S 33.6 34.1 34.6 35.1 35.6
σθ 22 23 24 25 26 27 28


POTENTIAL TEMP
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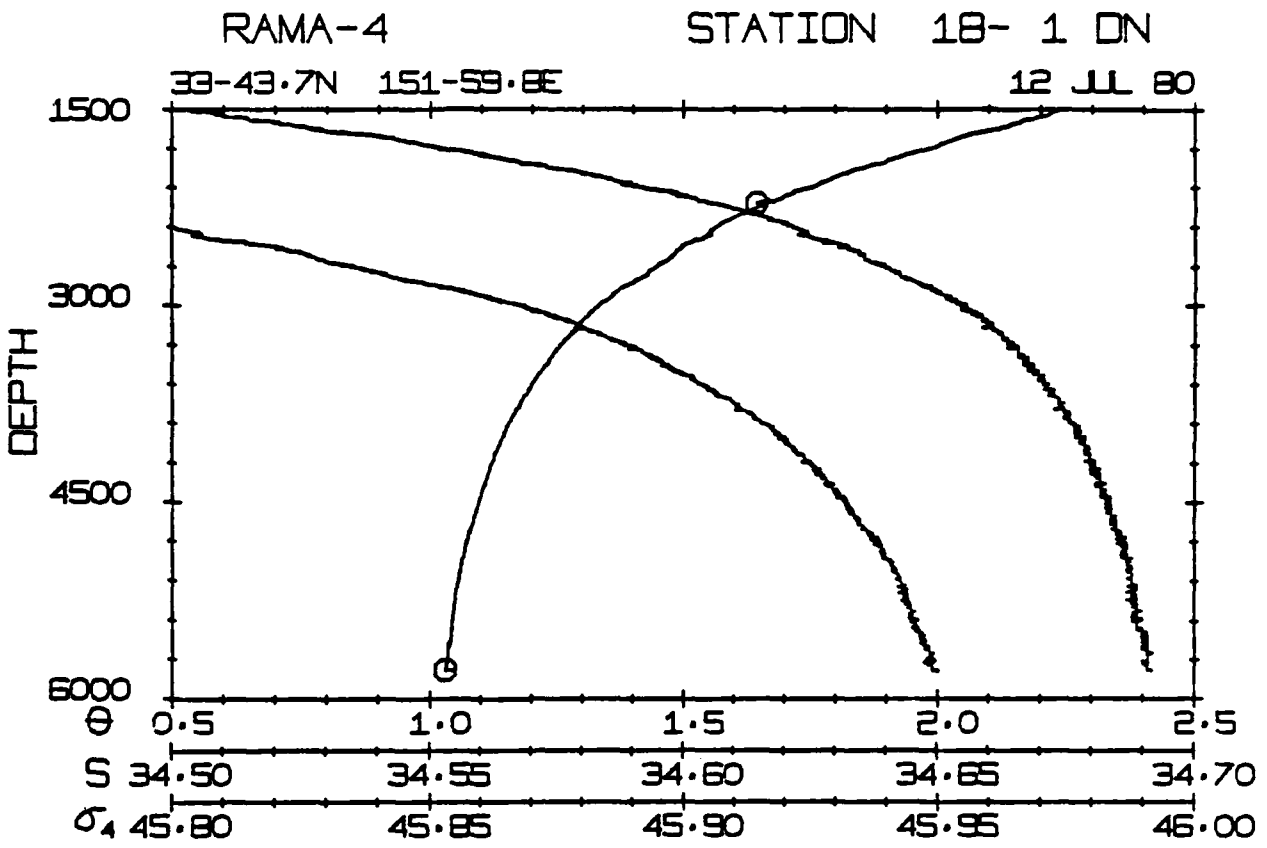
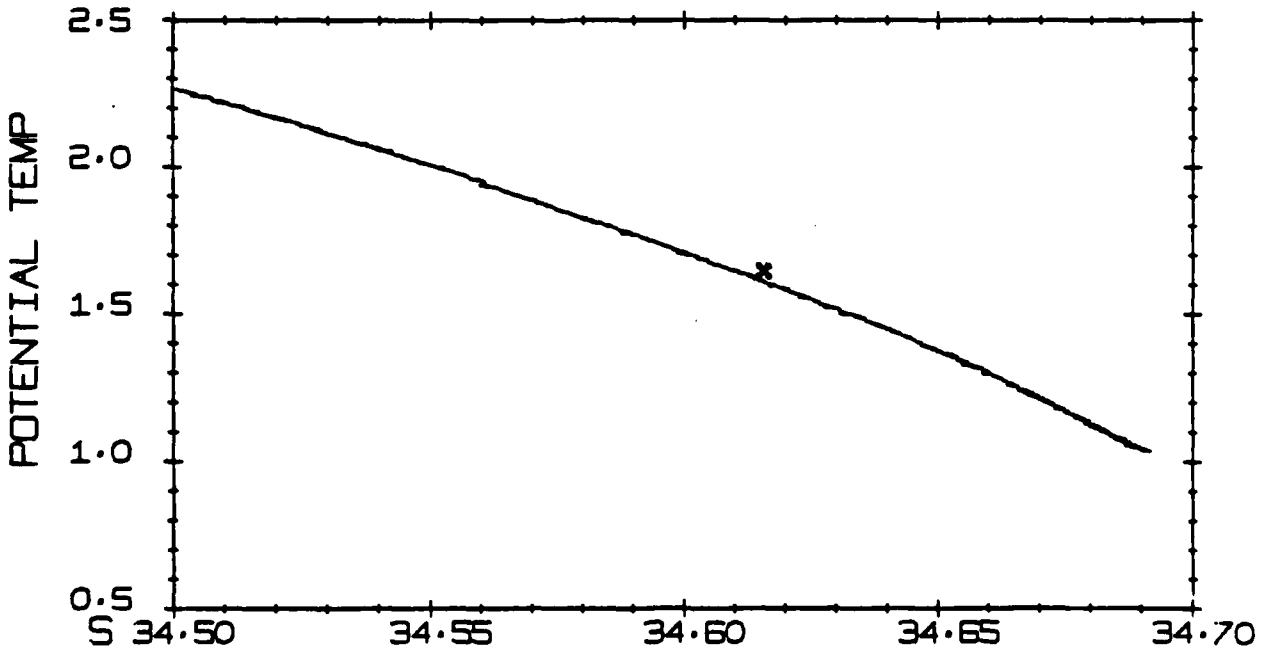
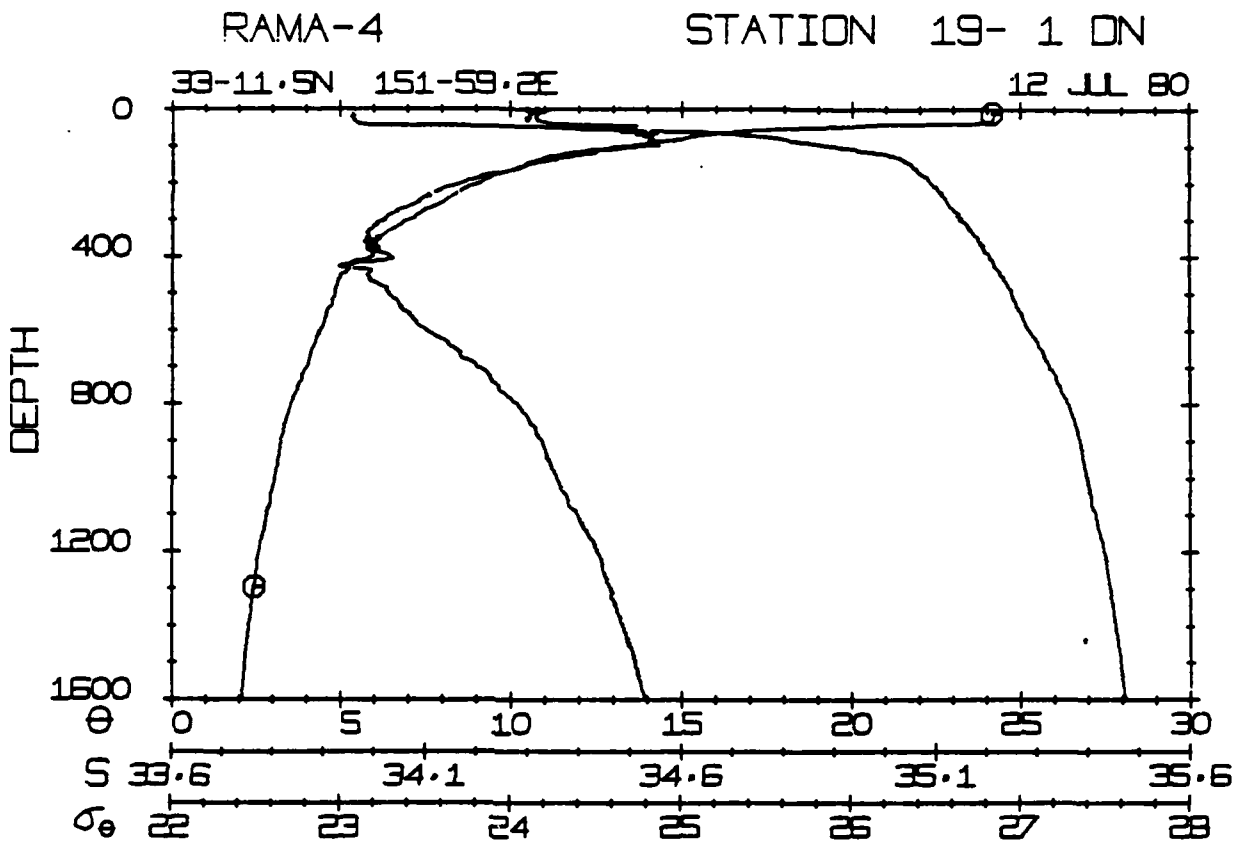
25
20
15
10
5
0
S 33.6 34.1 34.6 35.1 35.6


RAMA-4
STATION 18- 1 DN
33-43.7N 151-59.8E
12 JUL 80
1500
3000
4500
6000
DEPTH
θ 0.5 1.0 1.5 2.0 2.5
S 34.50 34.55 34.60 34.65 34.70
σ4 45.80 45.85 45.90 45.95 46.00


2.5
2.0
1.5
1.0
0.5
POTENTIAL TEMP
S 34.50 34.55 34.60 34.65 34.70


RAMA-4
STATION 19- 1 DN
33-11.5N 151-59.2E
12 JUL 80
DEPTH
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400
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1200
1600
θ
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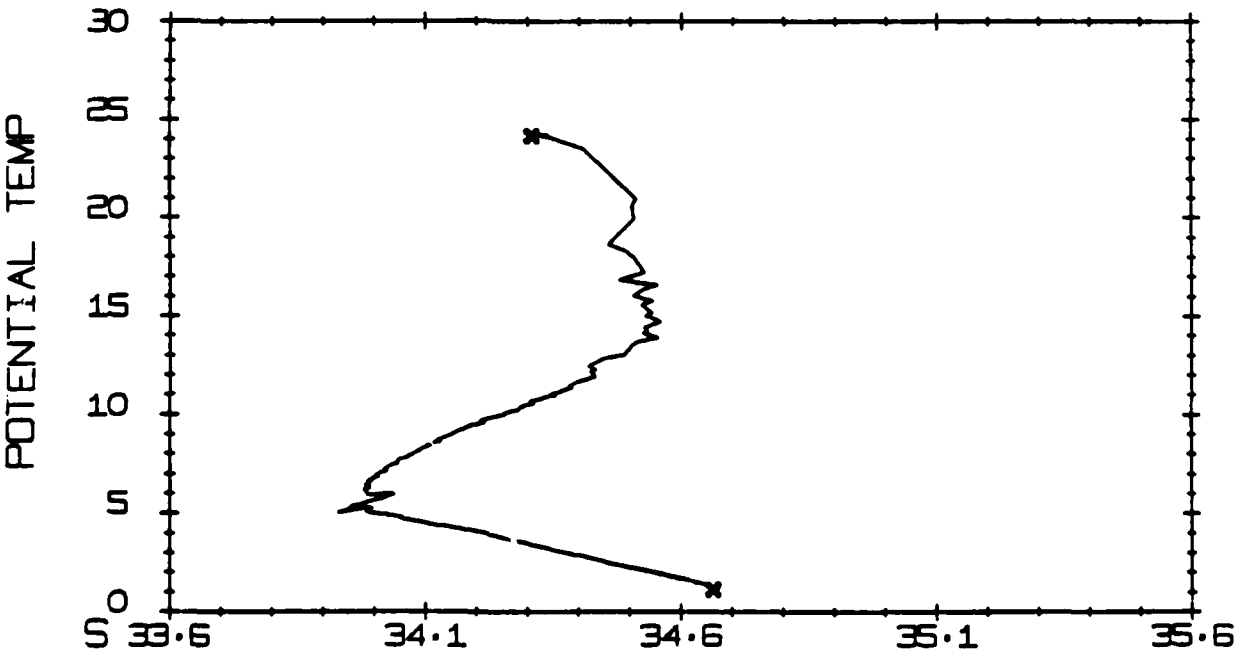
S
33.6 34.1 34.6 35.1 35.6
σθ
22 23 24 25 26 27 28


POTENTIAL TEMP
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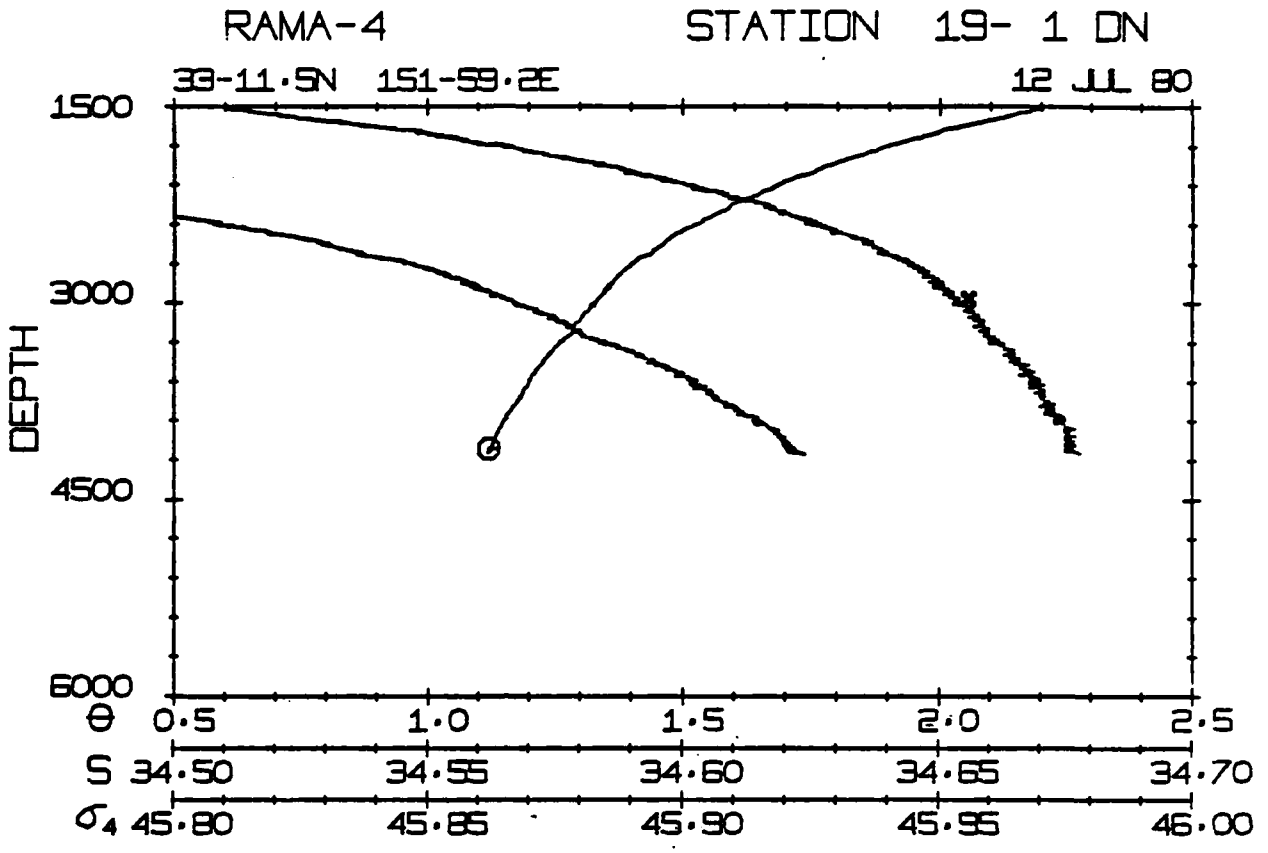
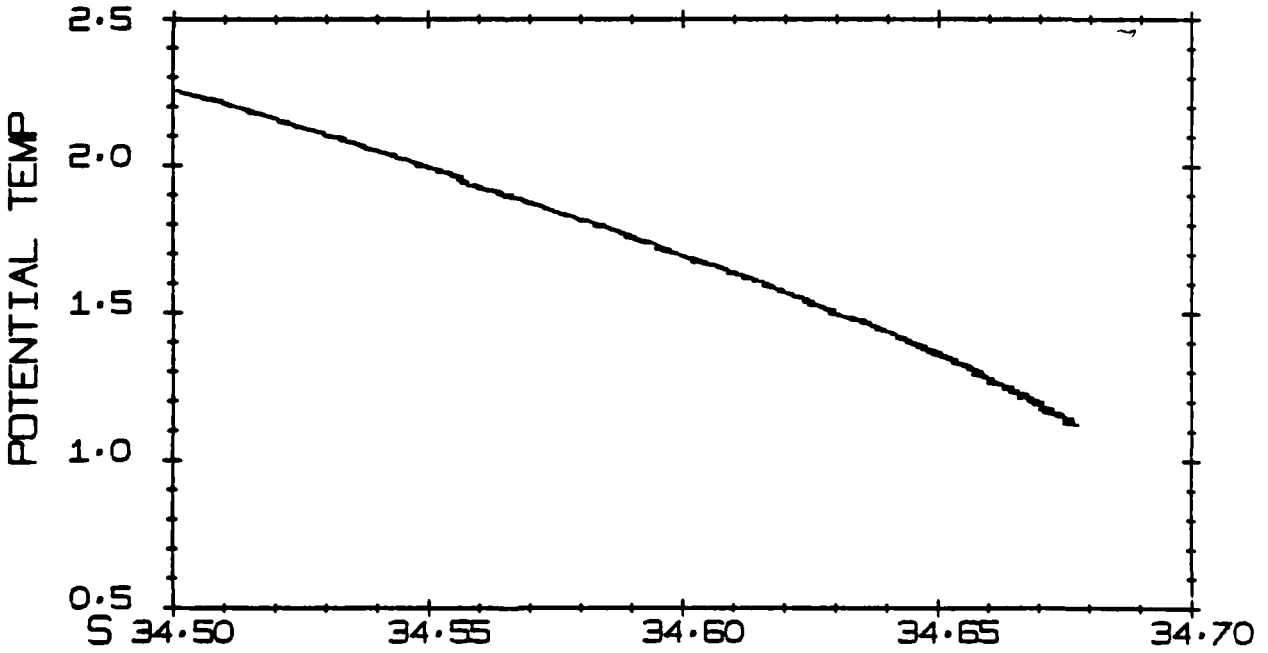
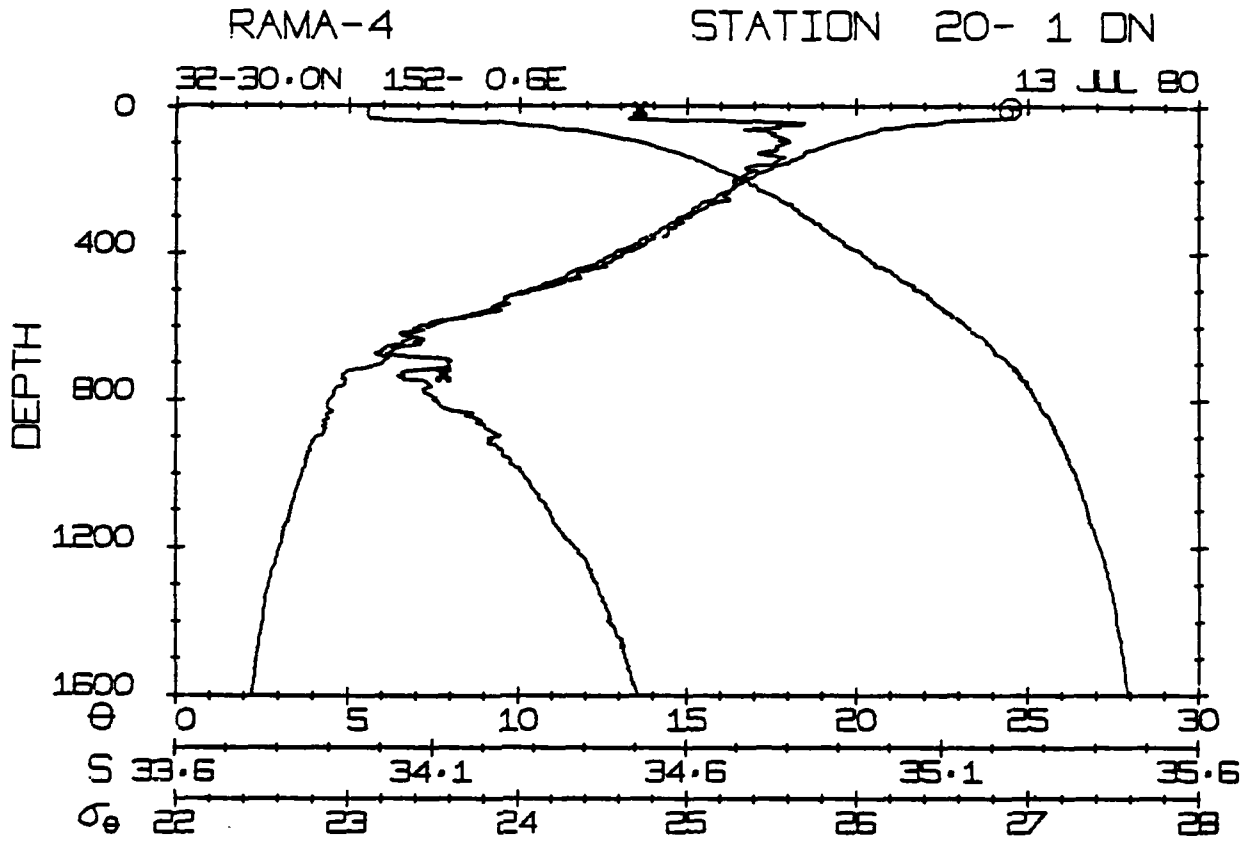
25
20
15
10
5
0
S
33.6 34.1 34.6 35.1 35.6


RAMA-4
STATION 19- 1 DN
33-11.5N 151-59.2E
12 JUL 80
1500
3000
4500
6000
DEPTH
θ 0.5 1.0 1.5 2.0 2.5
S 34.50 34.55 34.60 34.65 34.70
σ4 45.80 45.85 45.90 45.95 46.00


2.5
2.0
1.5
1.0
0.5
POTENTIAL TEMP
S 34.50 34.55 34.60 34.65 34.70


RAMA-4
STATION 20- 1 DN
32-30.0N 152- 0.6E
13 JUL 80
DEPTH
0
400
800
1200
1600
θ
0
5
10
15
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S
33.6
34.1
34.6
35.1
35.6
σθ
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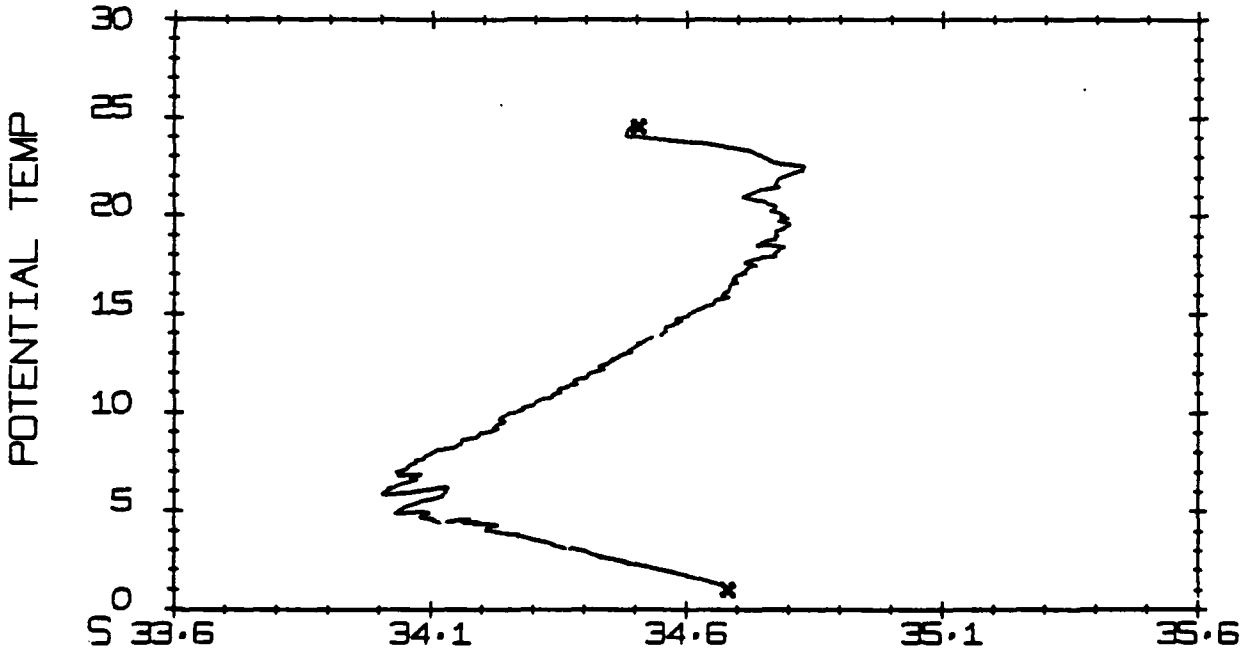
POTENTIAL TEMP
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20
15
10
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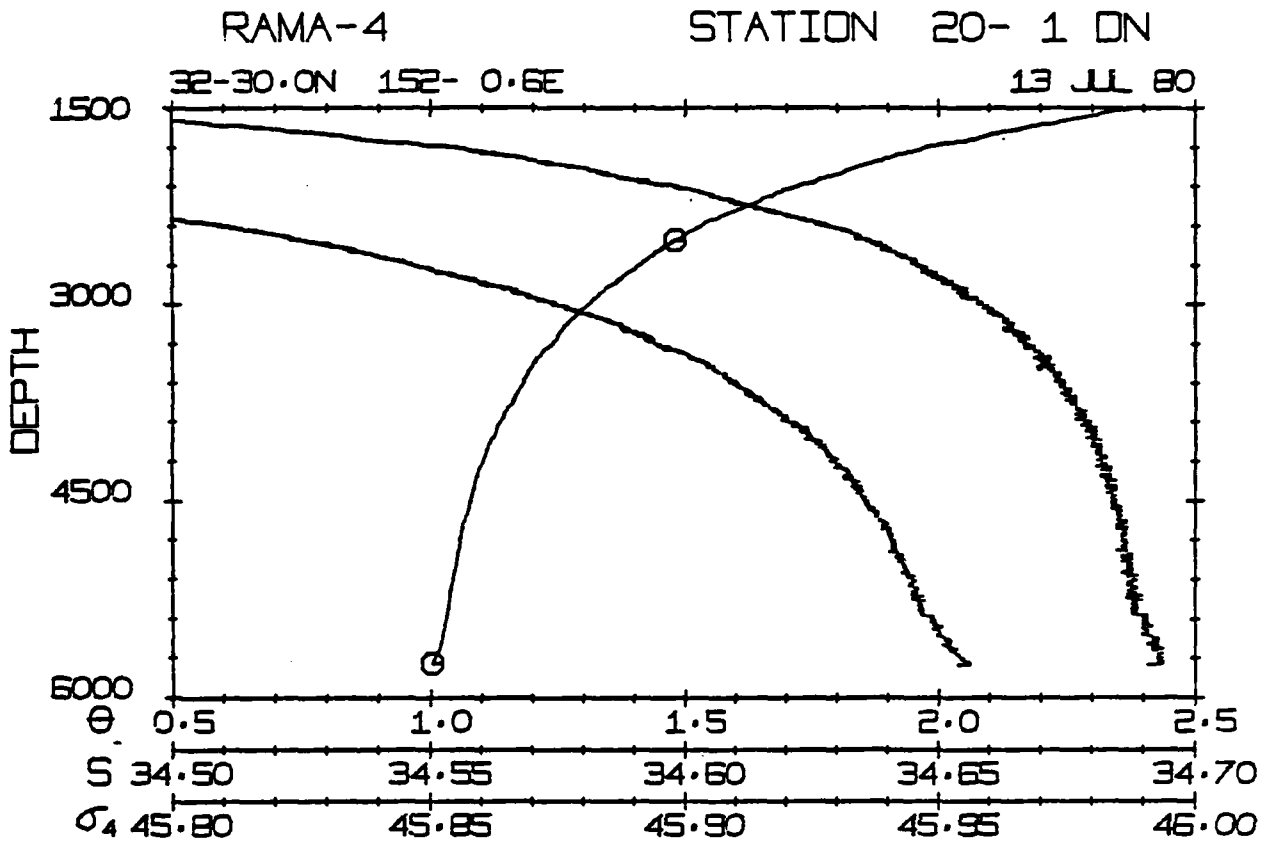
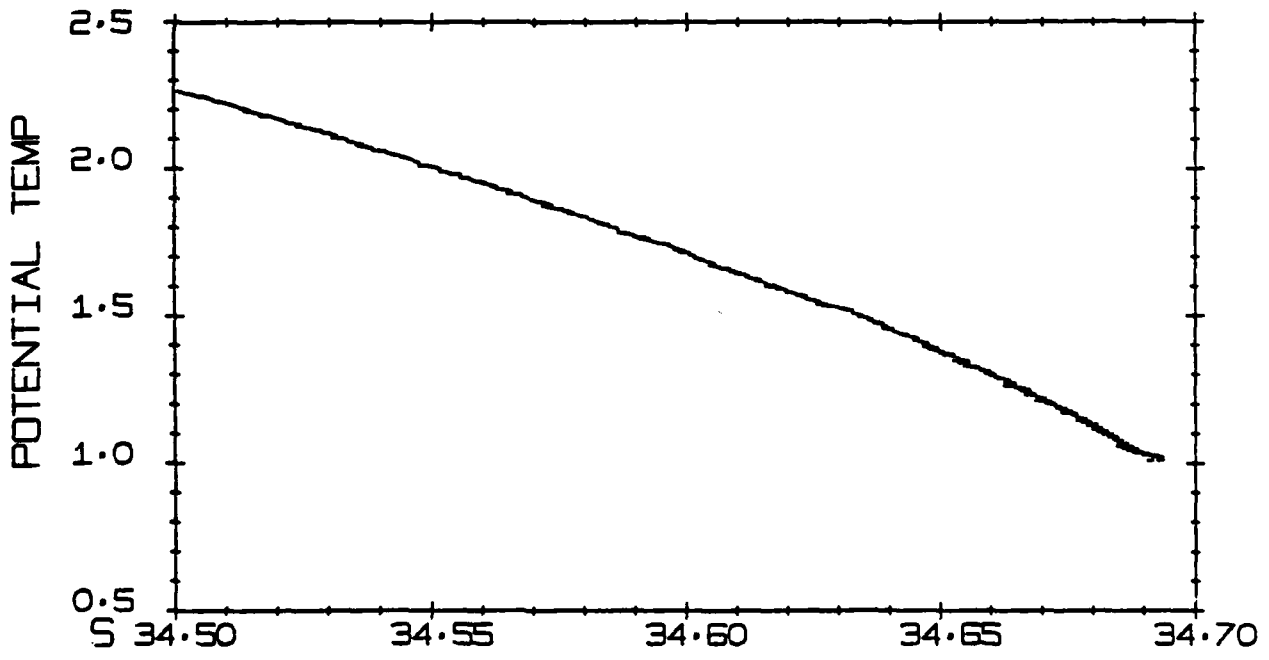
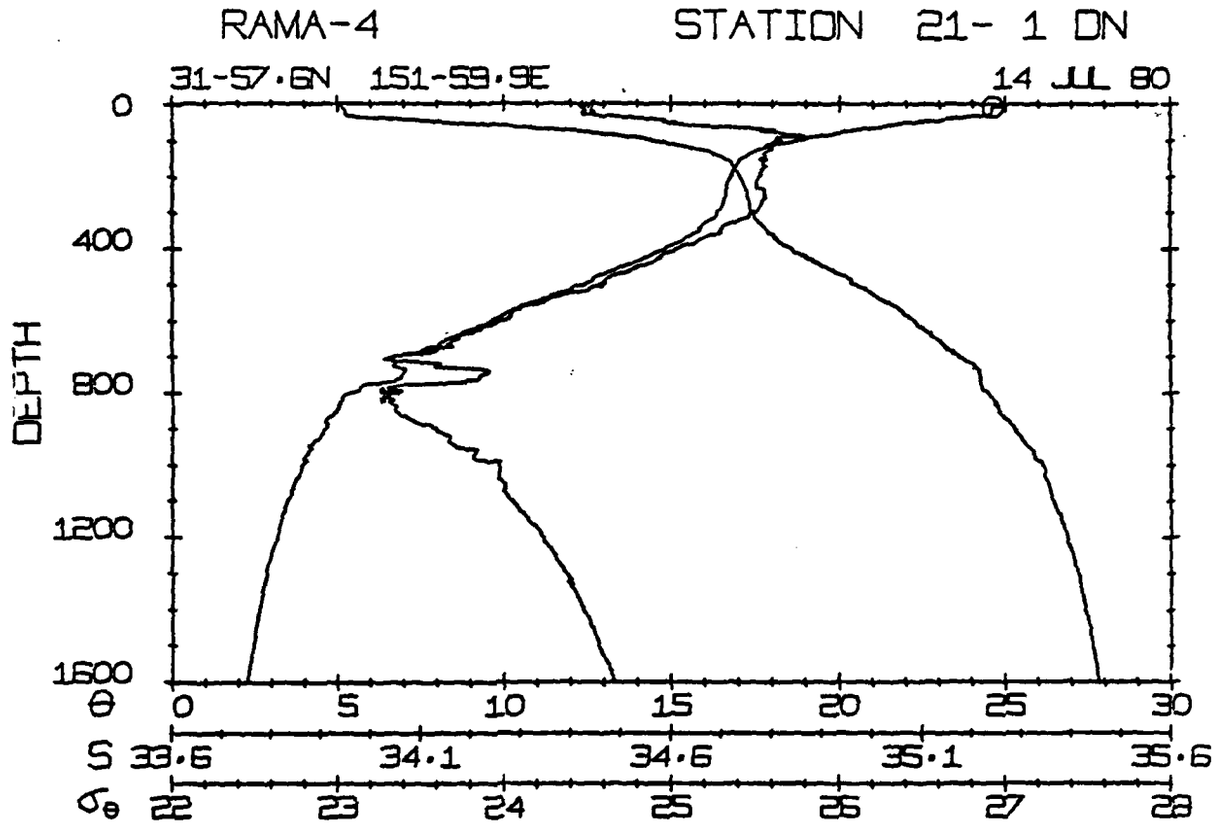
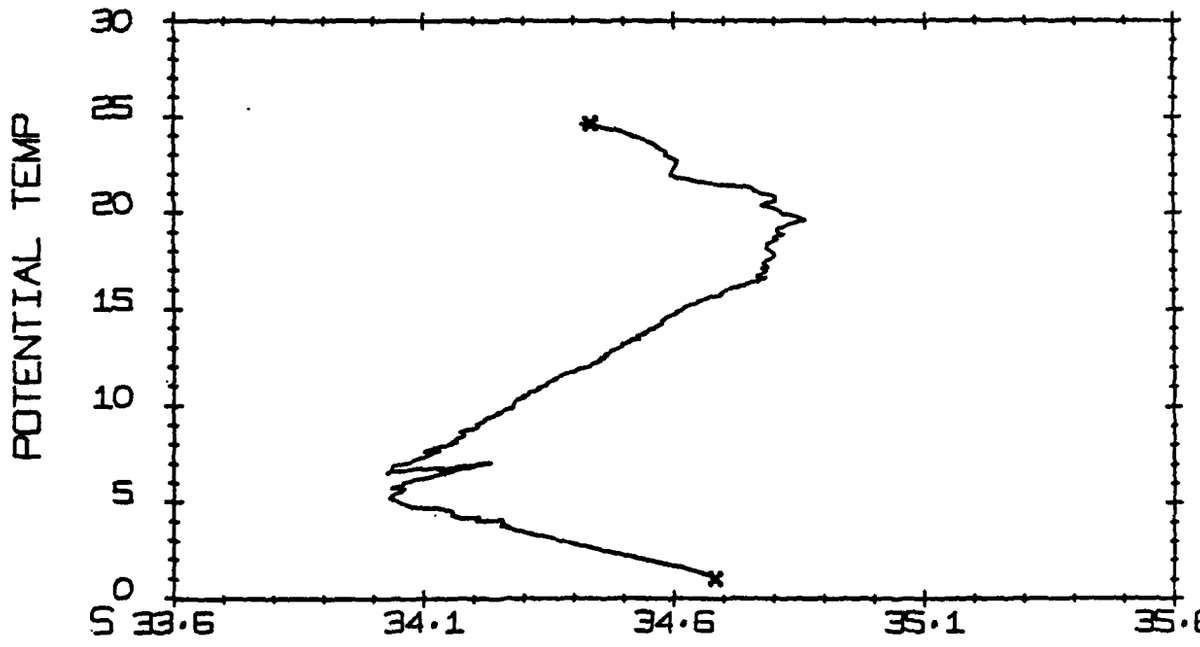
S
33.6
34.1
34.6
35.1
35.6


RAMA-4
STATION 20- 1 DN
32-30.0N 152- 0.6E
13 JUL 80
1500
3000
4500
6000
DEPTH
θ 0.5 1.0 1.5 2.0 2.5
S 34.50 34.55 34.60 34.65 34.70
σ4 45.80 45.85 45.90 45.95 46.00


2.5
2.0
1.5
1.0
0.5
POTENTIAL TEMP
S 34.50 34.55 34.60 34.65 34.70


RAMA-4
STATION 21- 1 DN
31-57.6N 151-59.9E
14 JUL 80
DEPTH
0
400
800
1200
1600
θ
0 5 10 15 20 25 30
S 33.6 34.1 34.6 35.1 35.6
σθ 22 23 24 25 26 27 28


POTENTIAL TEMP
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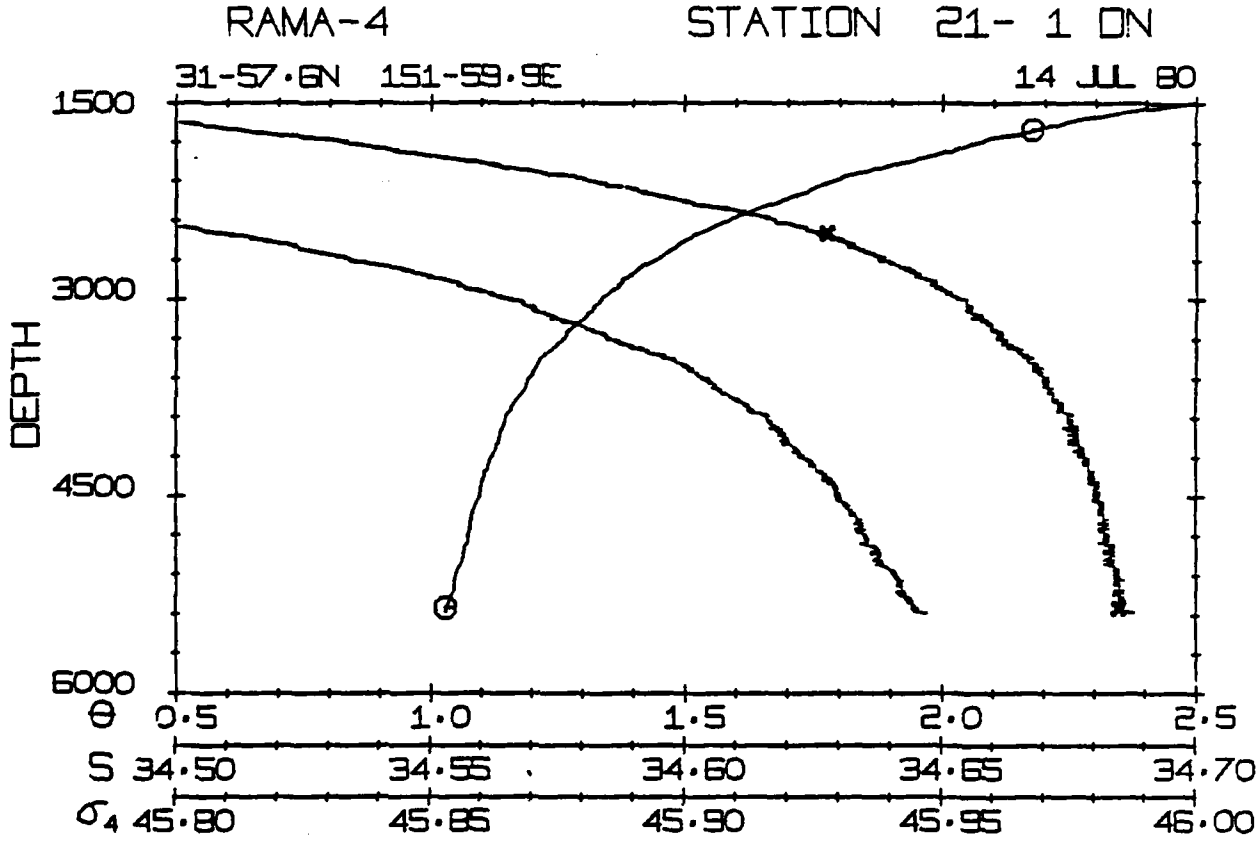
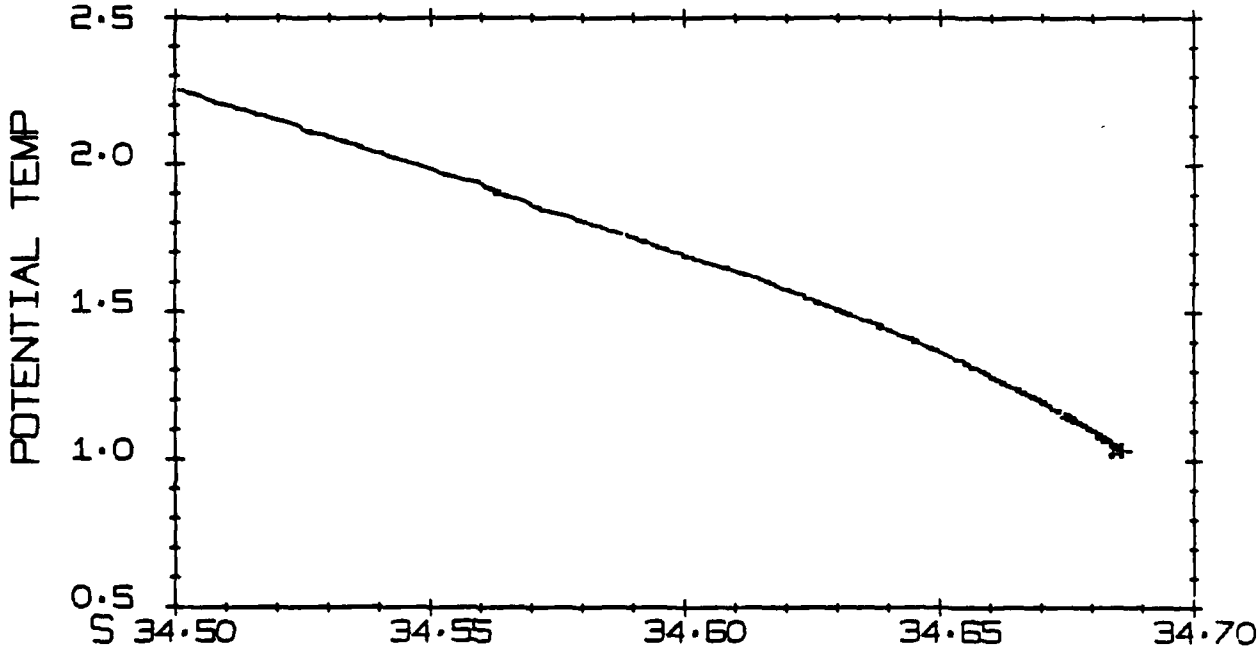
25
20
15
10
5
0
S 33.6 34.1 34.6 35.1 35.6


RAMA-4
STATION 21- 1 DN
31-57·6N 151-59·9E
14 JUL 80
1500
3000
4500
6000
DEPTH
θ 0·5 1·0 1·5 2·0 2·5
S 34·50 34·55 34·60 34·65 34·70
σ4 45·80 45·85 45·90 45·95 46·00


2·5
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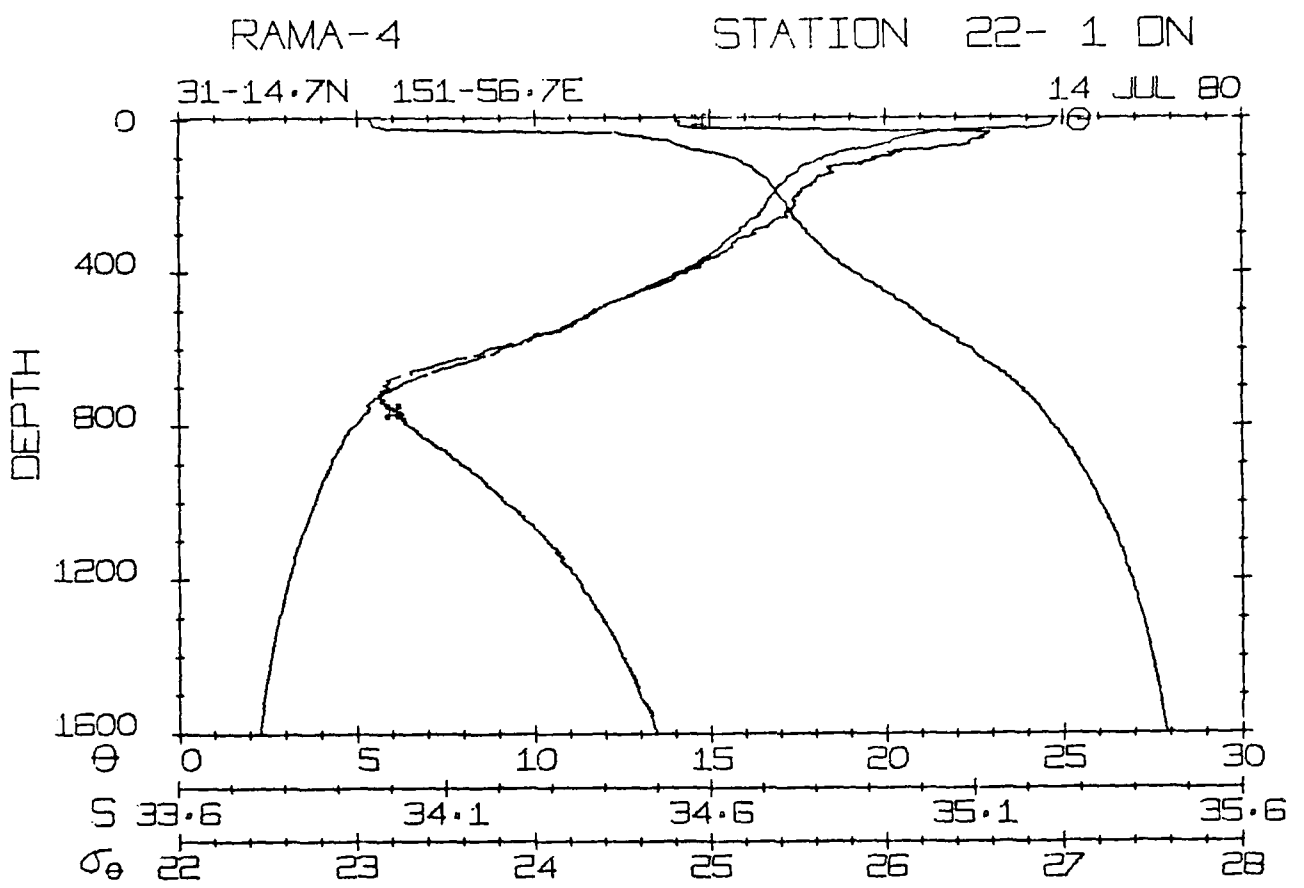
1·5
1·0
0·5
POTENTIAL TEMP
S 34·50 34·55 34·60 34·65 34·70


RAMA-4
STATION 22- 1 DN
31-14.7N 151-56.7E
14 JUL 80
DEPTH
0
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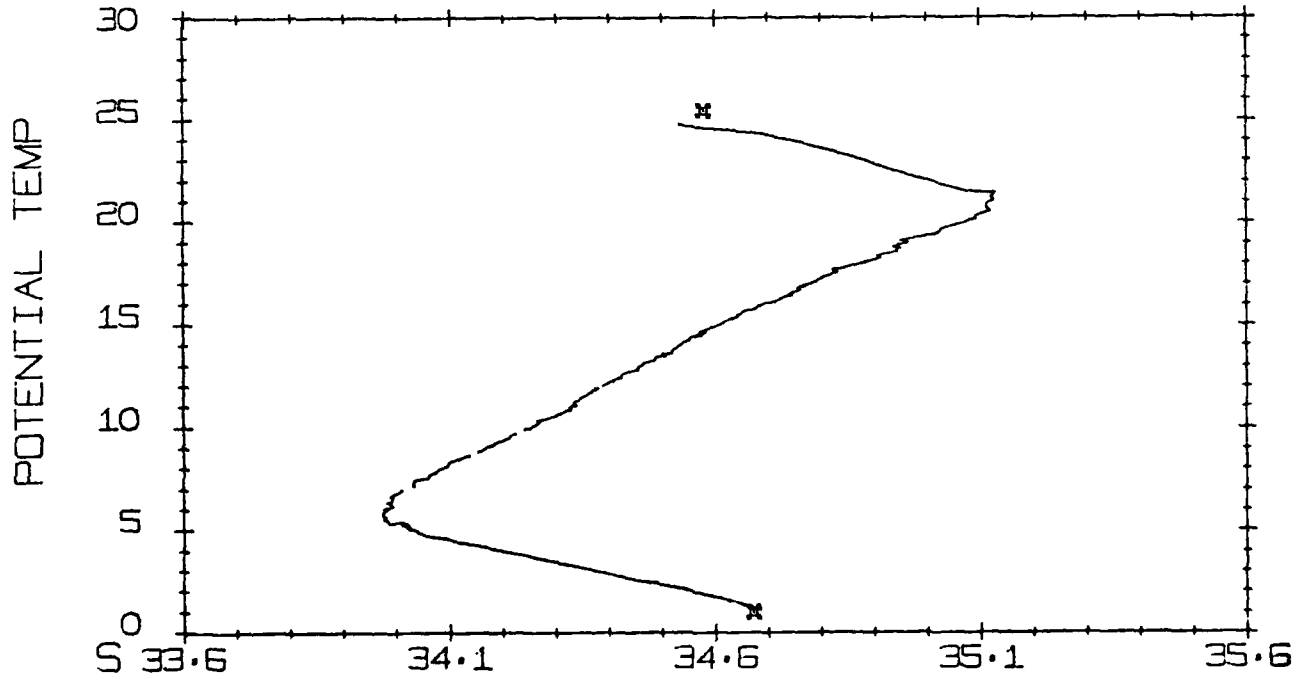
800
1200
1600
θ
0 5 10 15 20 25 30
S 33.6 34.1 34.6 35.1 35.6
σθ 22 23 24 25 26 27 28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20
15
10
5
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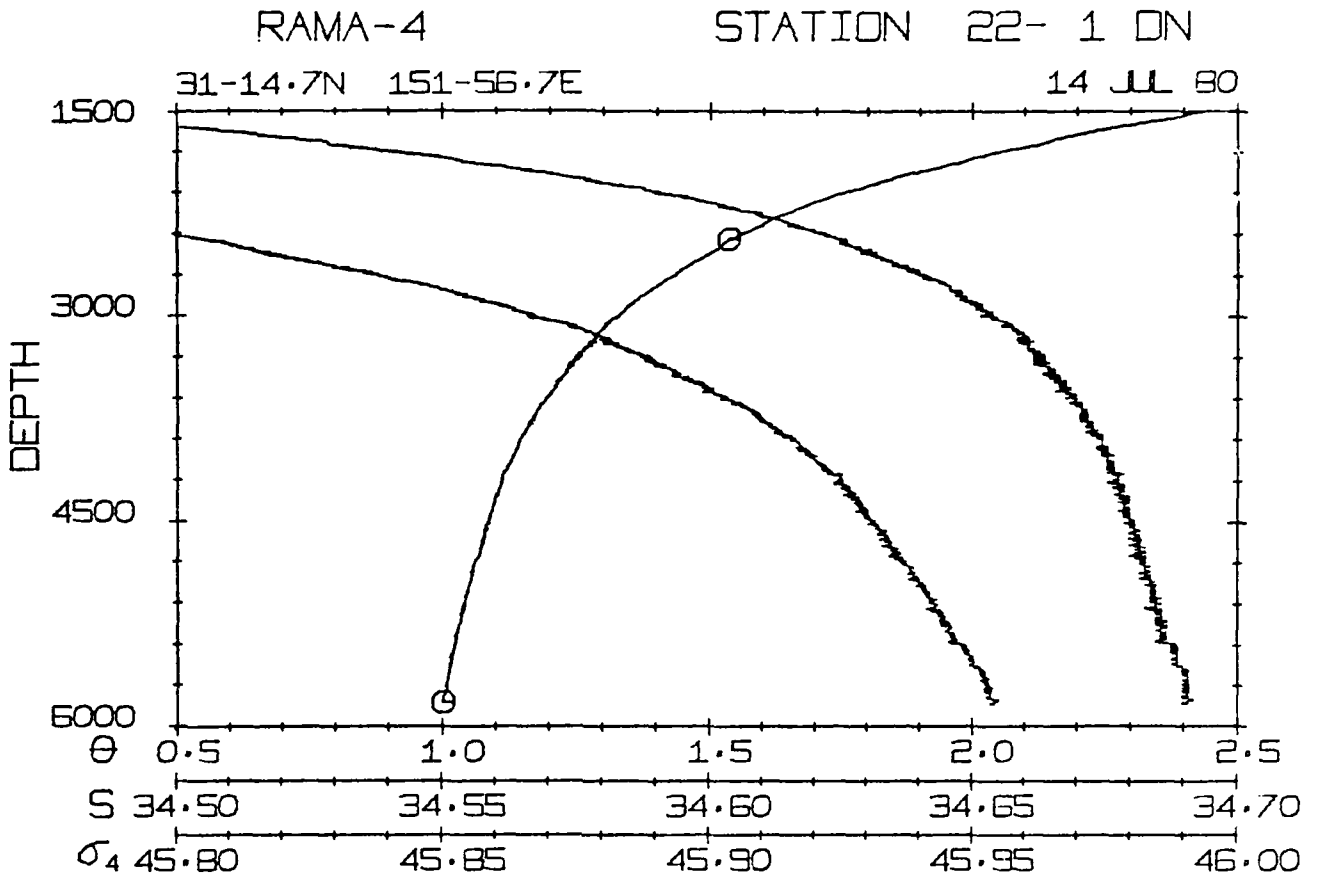
S 33.6 34.1 34.6 35.1 35.6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STATION 22- 1 DN
31-14.7N 151-56.7E
14 JUL 80
DEPTH
1500
3000
4500
6000
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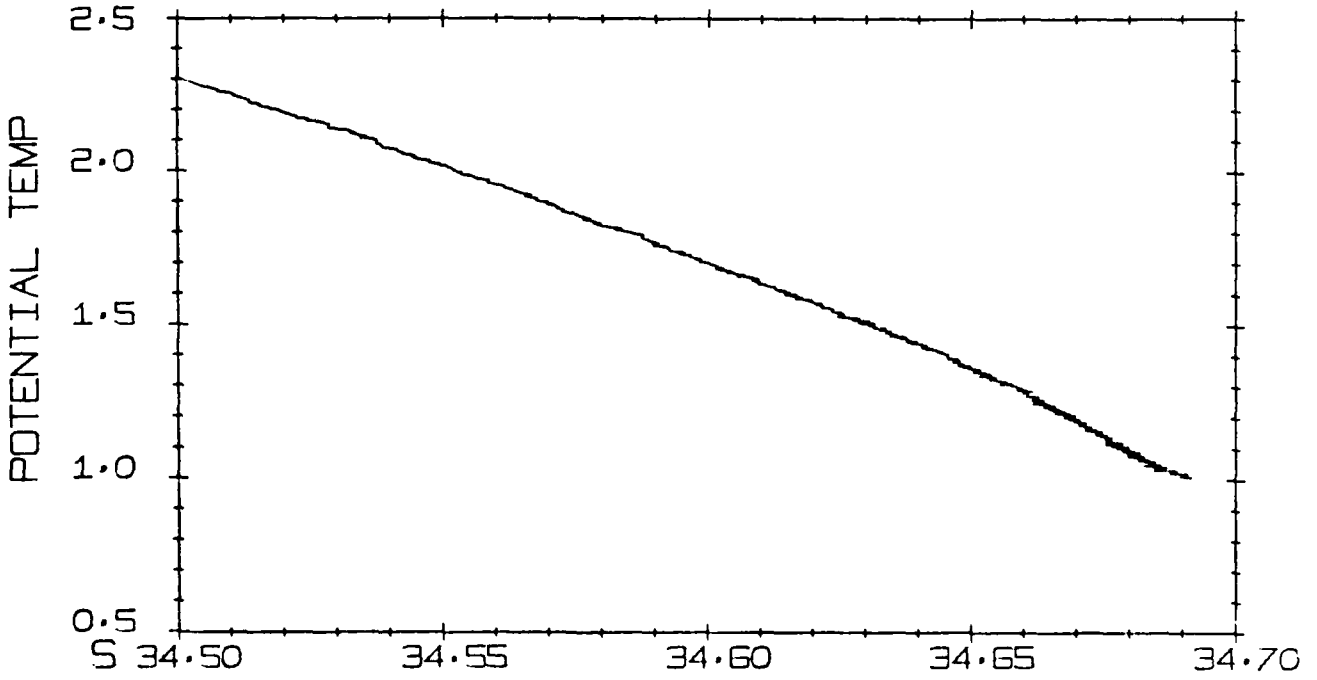
σ4 45.80 45.85 45.90 45.95 46.00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0.5
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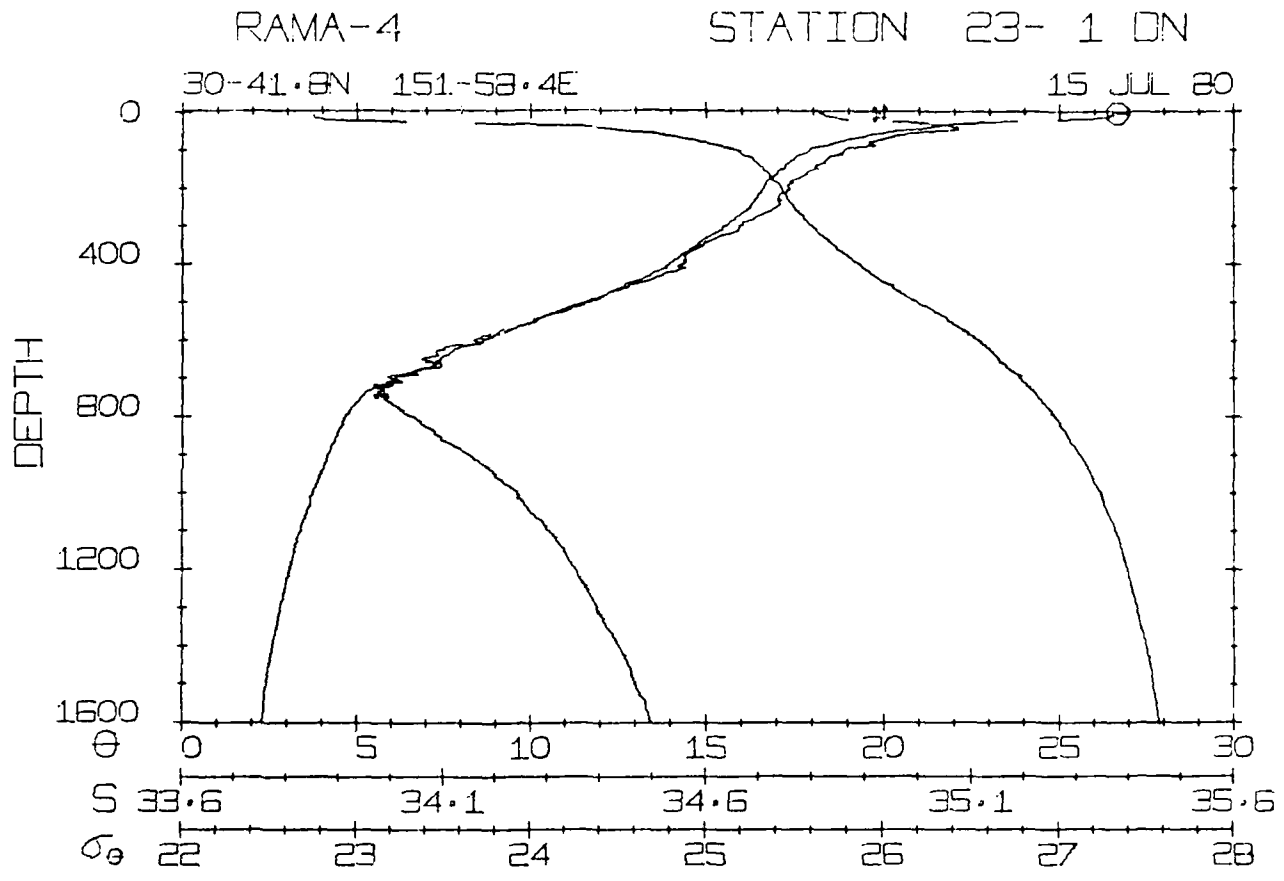
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30-41.8N 151-58.4E
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DEPTH
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1200
1600
θ 0 5 10 15 20 25 30
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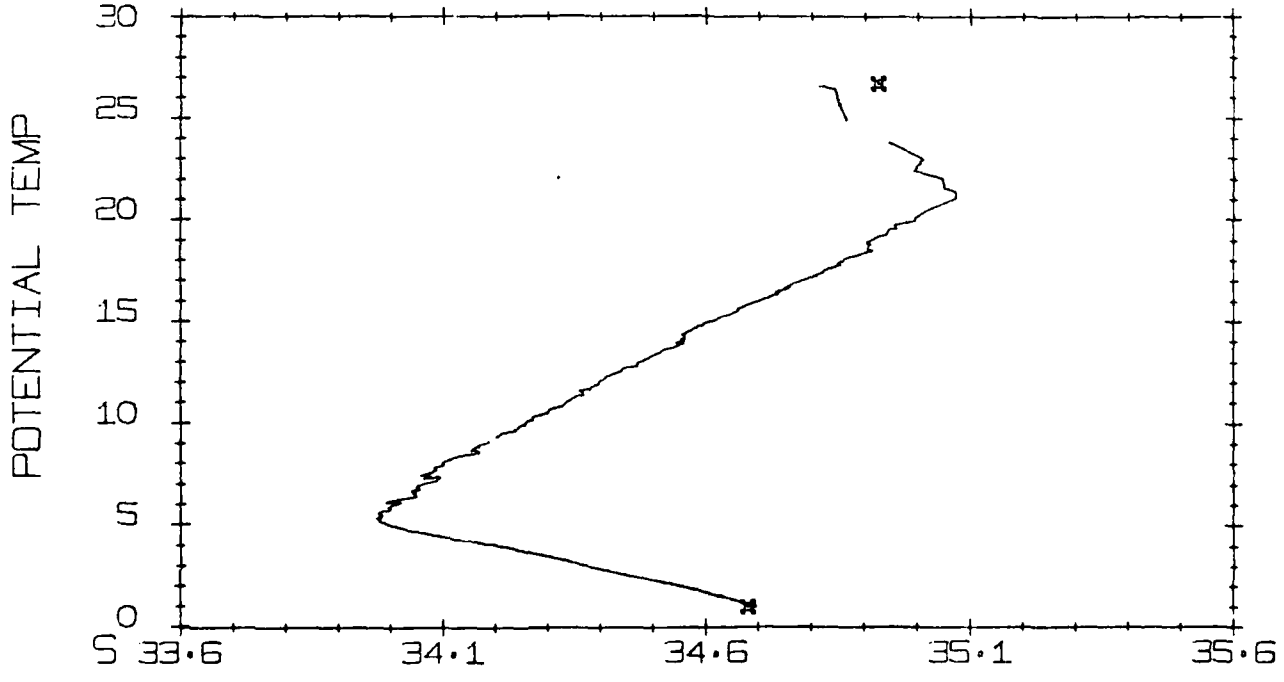
σθ 22 23 24 25 26 27 28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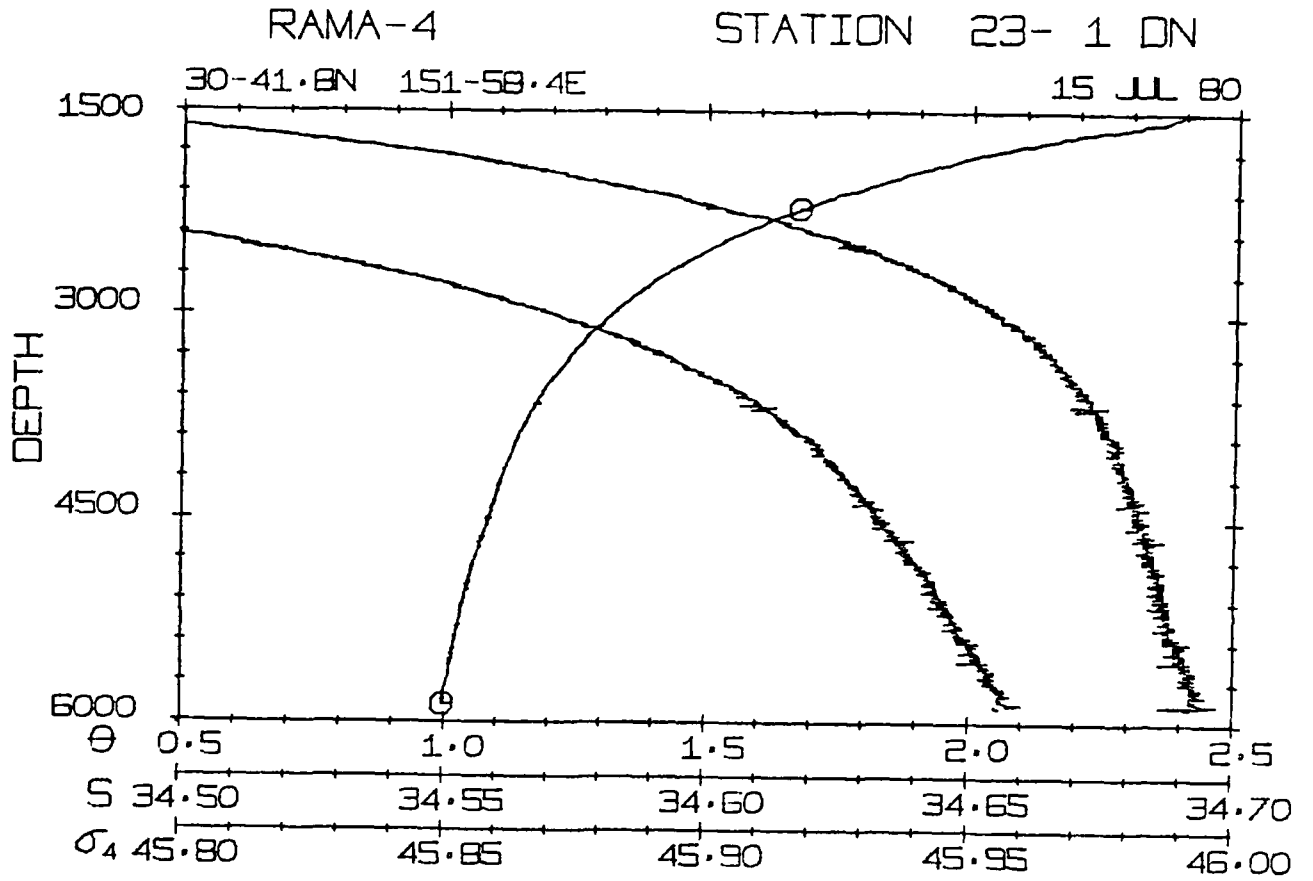
S 33.6 34.1 34.6 35.1 35.6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STATION 23- 1 DN
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4500
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DEPTH
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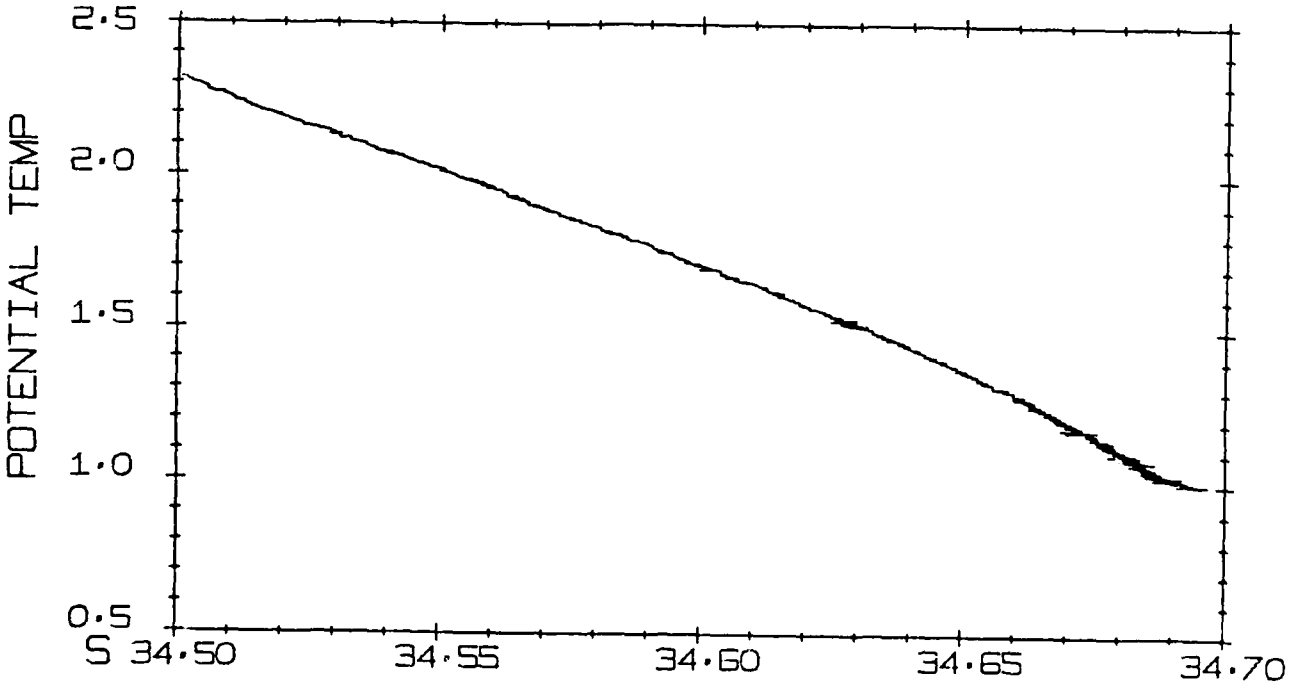
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POTENTIAL TEMP
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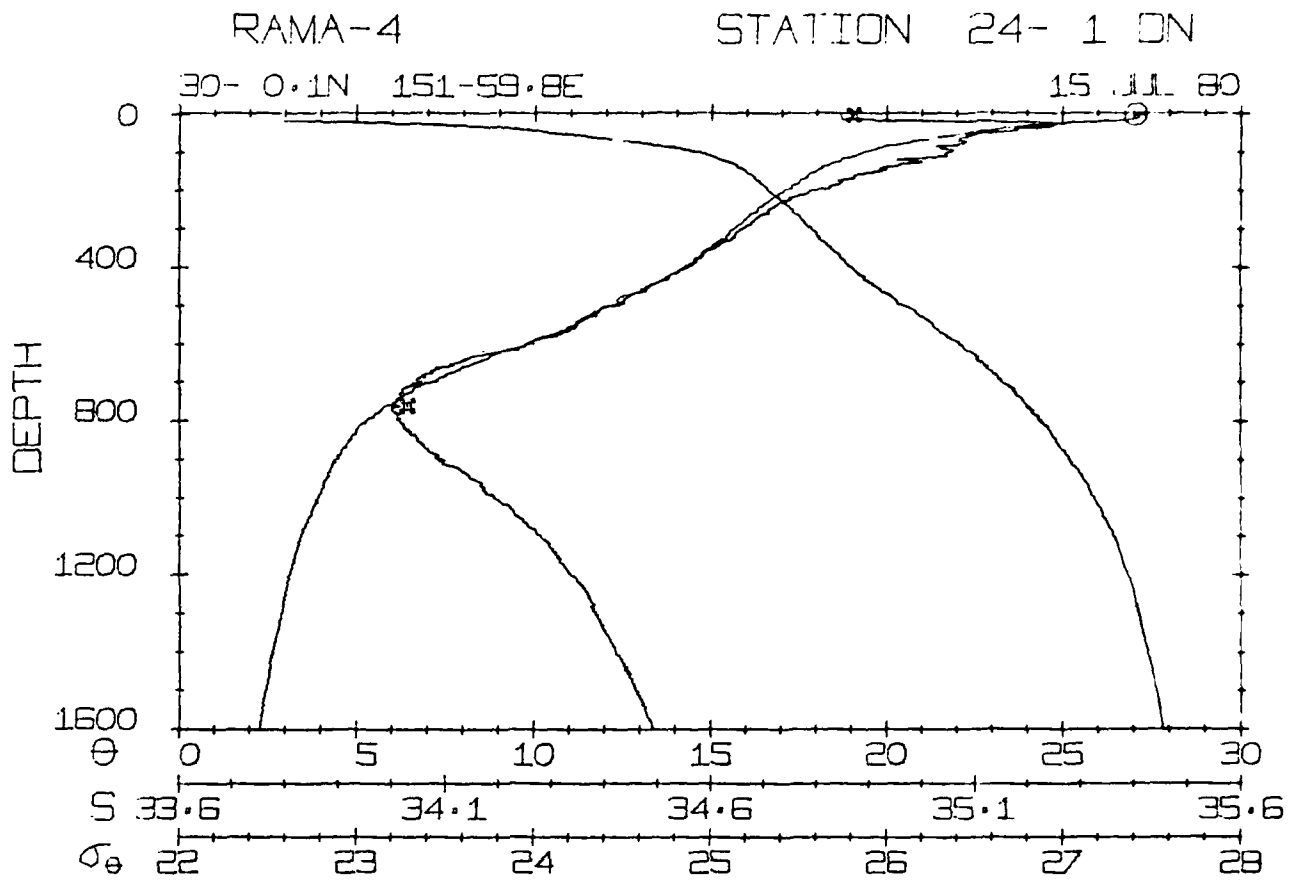
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DEPTH
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1200
1600
θ
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10
15
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34.1
34.6
35.1
35.6
σθ
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24
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27
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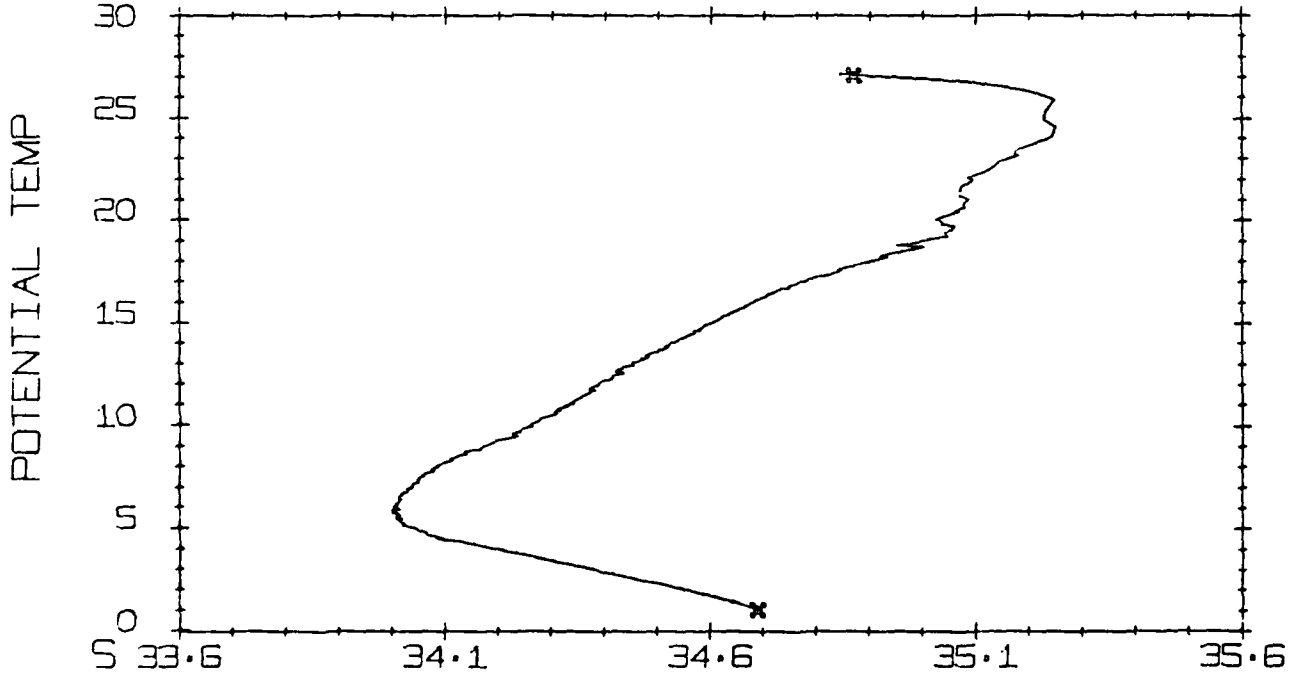
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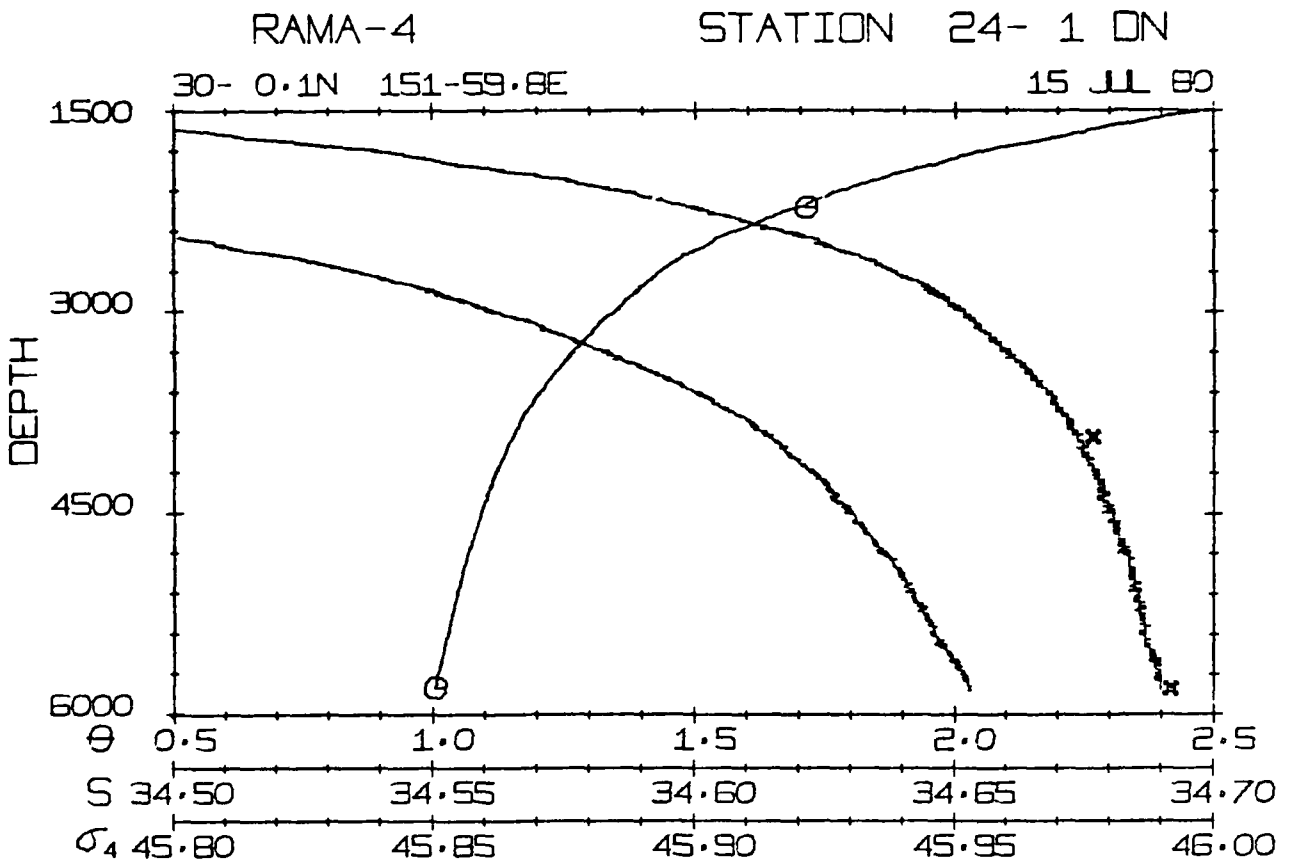
33.6
34.1
34.6
35.1
35.6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15 JUL 80
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3000
4500
6000
DEPTH
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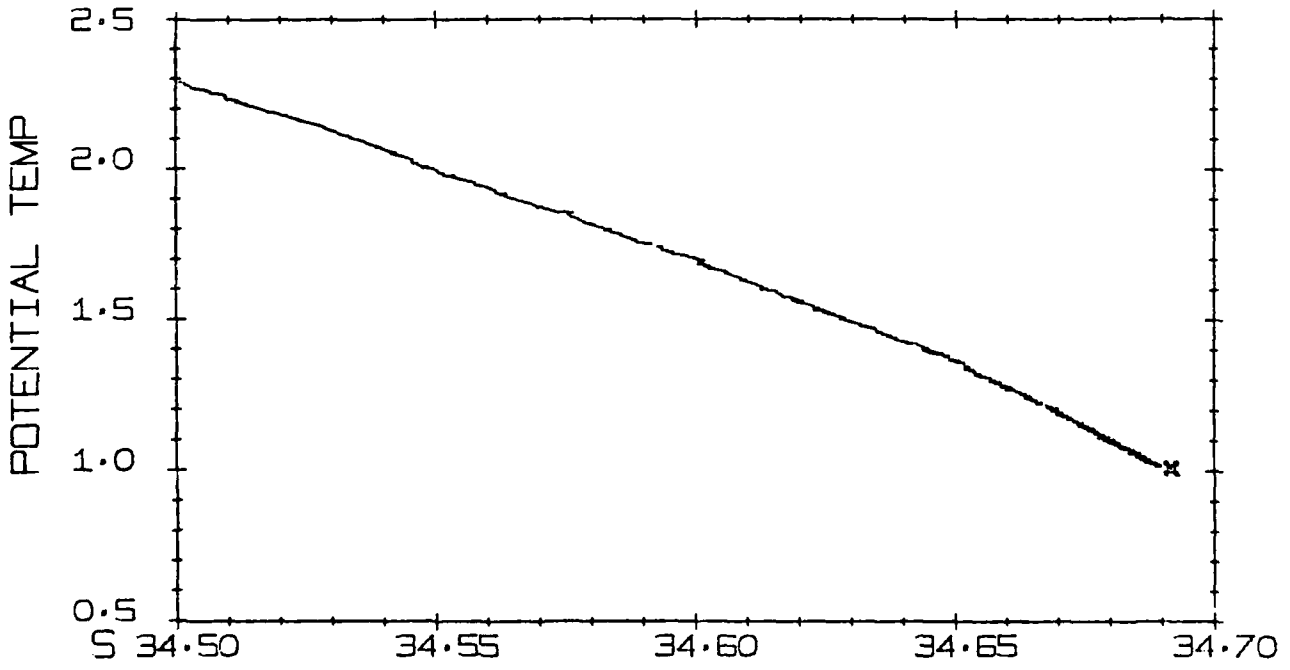
S 34.50 34.55 34.60 34.65 34.70
σ4 45.80 45.85 45.90 45.95 46.00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POTENTIAL TEMP
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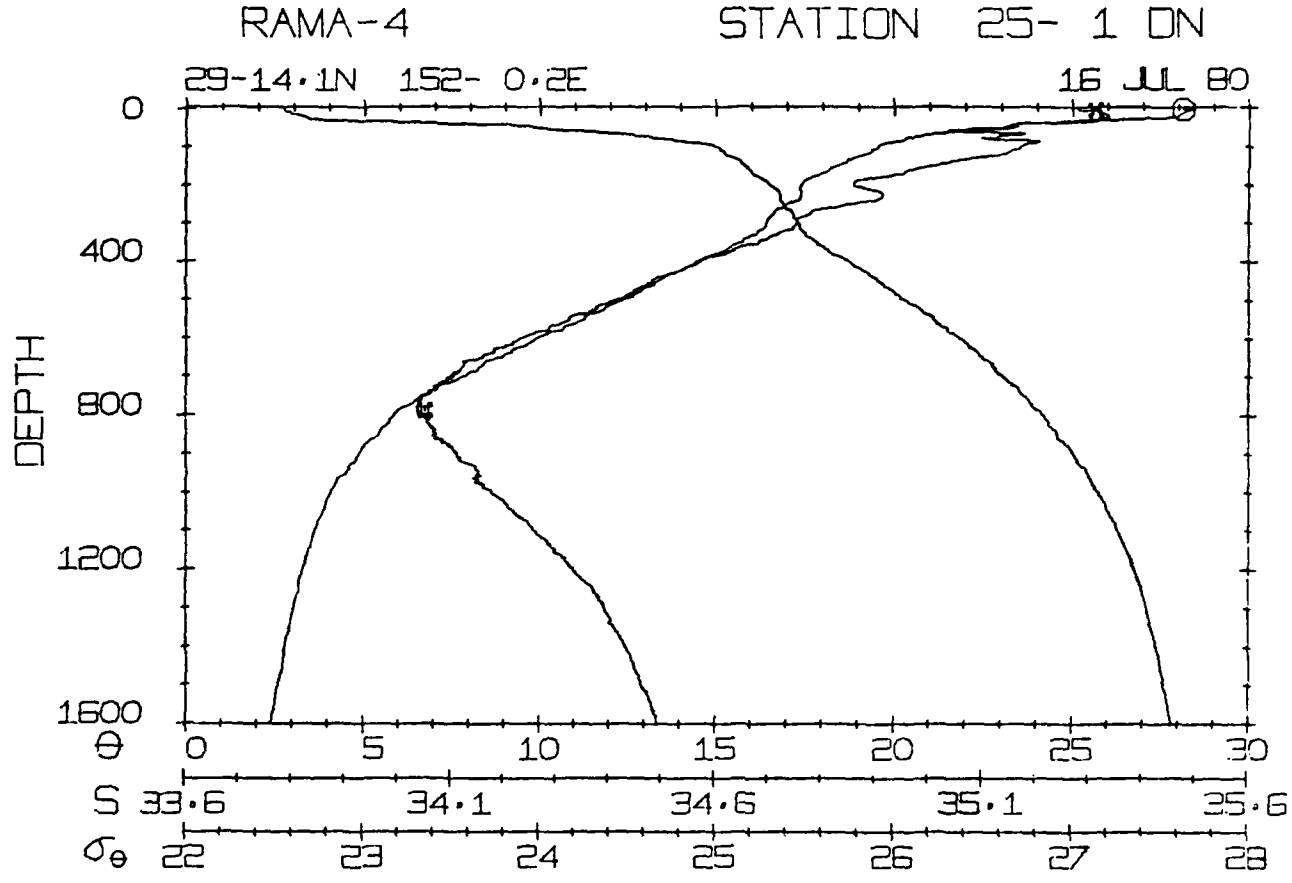
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29-14.1N 152- 0.2E
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DEPTH
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1200
1600
θ
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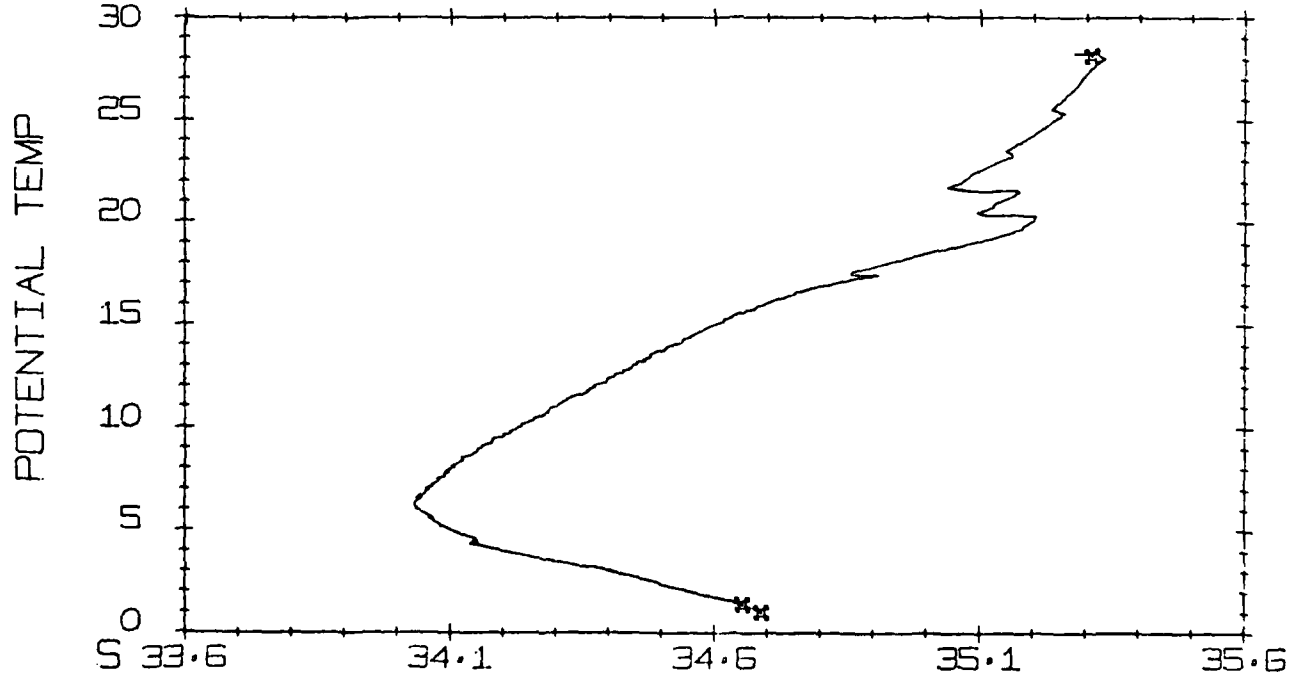
S
33.6 34.1 34.6 35.1 35.6
σθ
22 23 24 25 26 27 28


POTENTIAL TEMP
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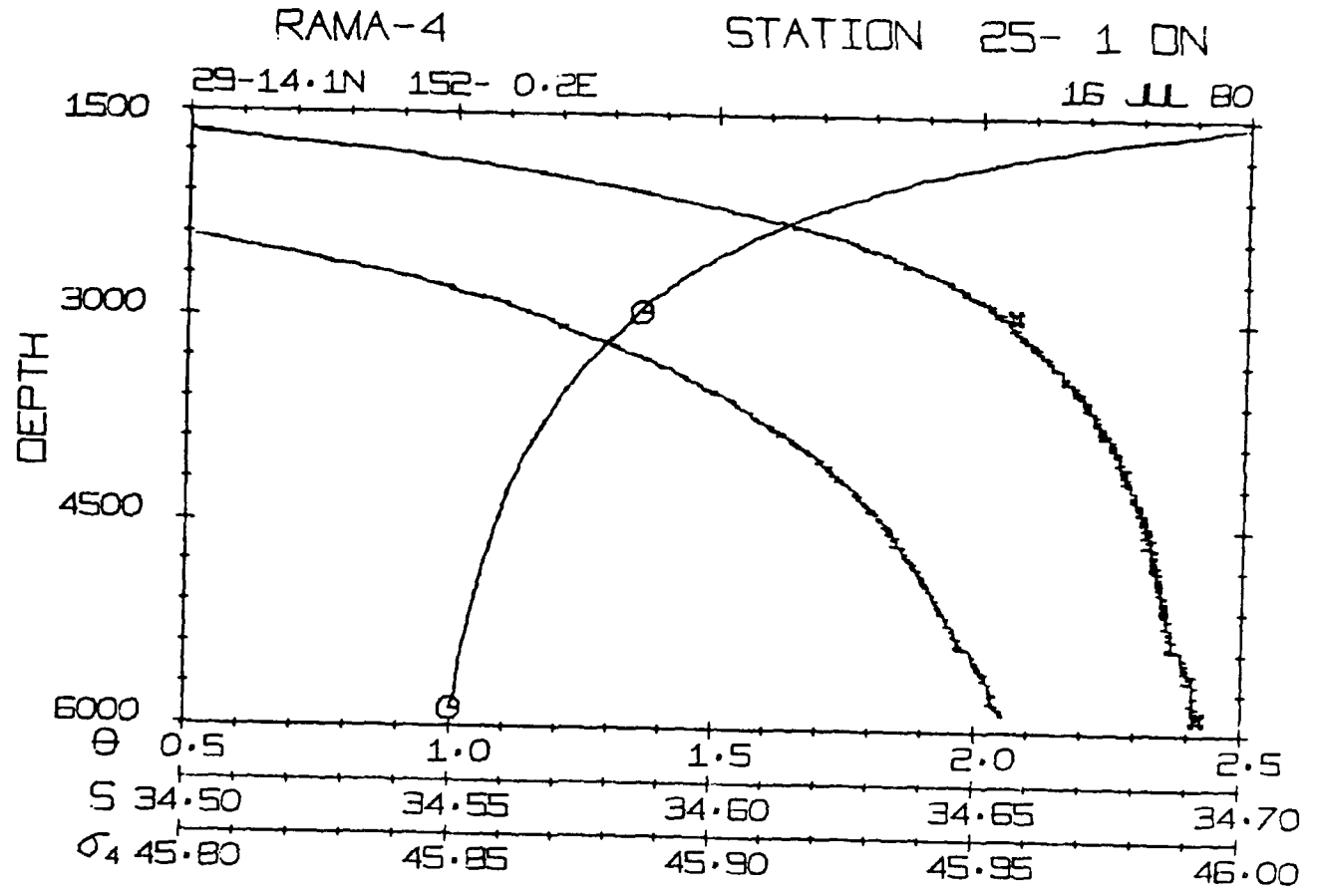
S
33.6 34.1 34.6 35.1 35.6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STATION 25- 1 ON
29-14.1N 152- 0.2E
16 JUL 80
1500
3000
4500
6000
DEPTH
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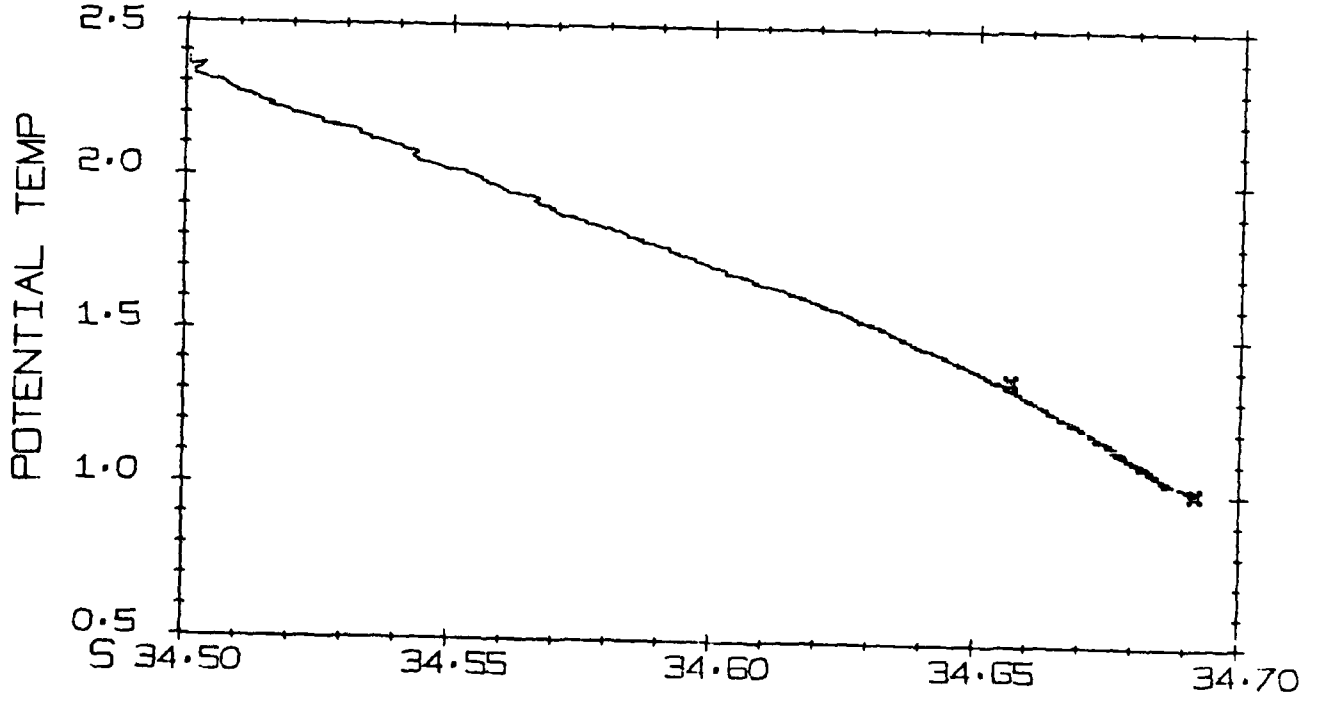
S 34.50 34.55 34.60 34.65 34.70
σ4 45.80 45.85 45.90 45.95 46.00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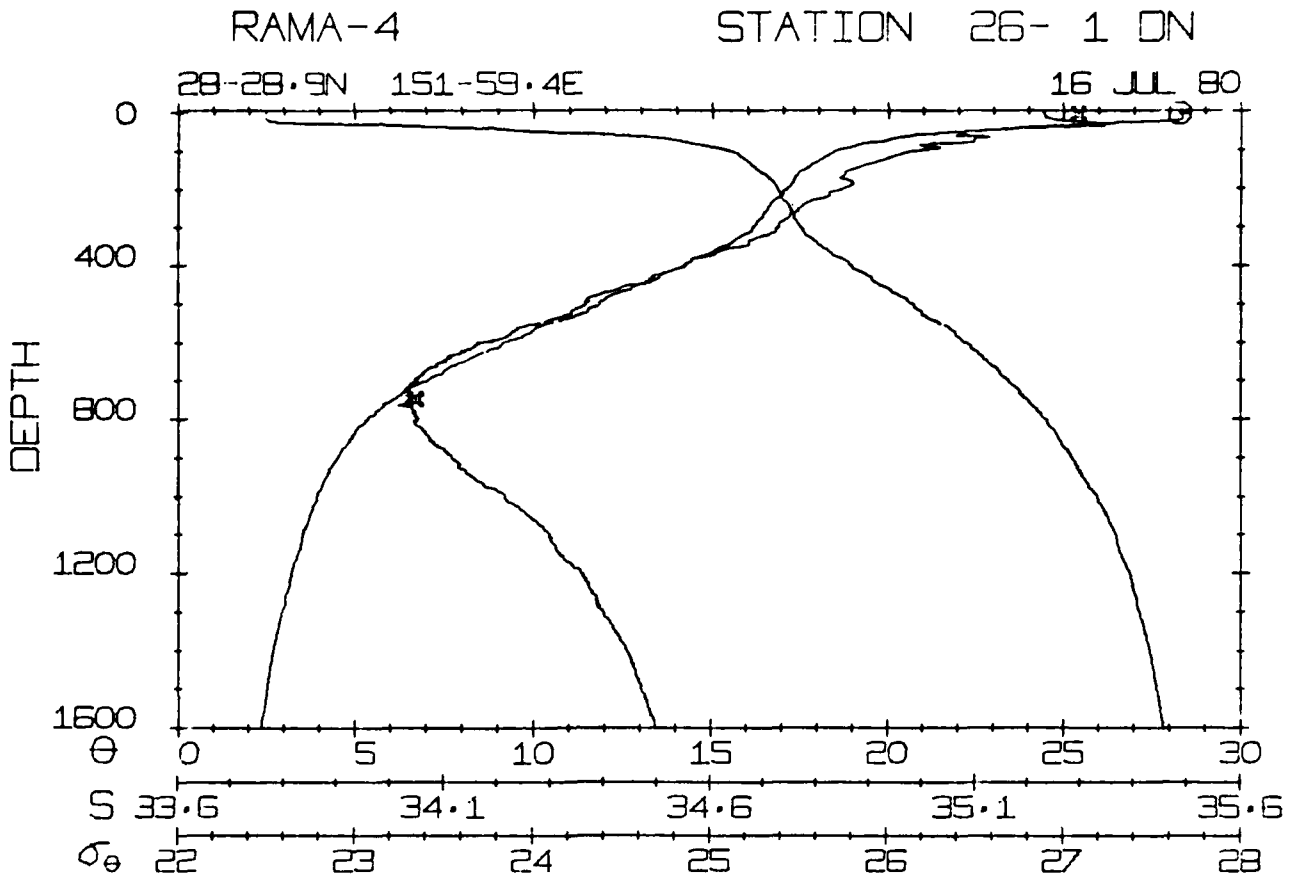
1.5
1.0
0.5
S 34.50 34.55 34.60 34.65 34.70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STATION 26- 1 DN
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DEPTH
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1200
1600
θ
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15
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σθ
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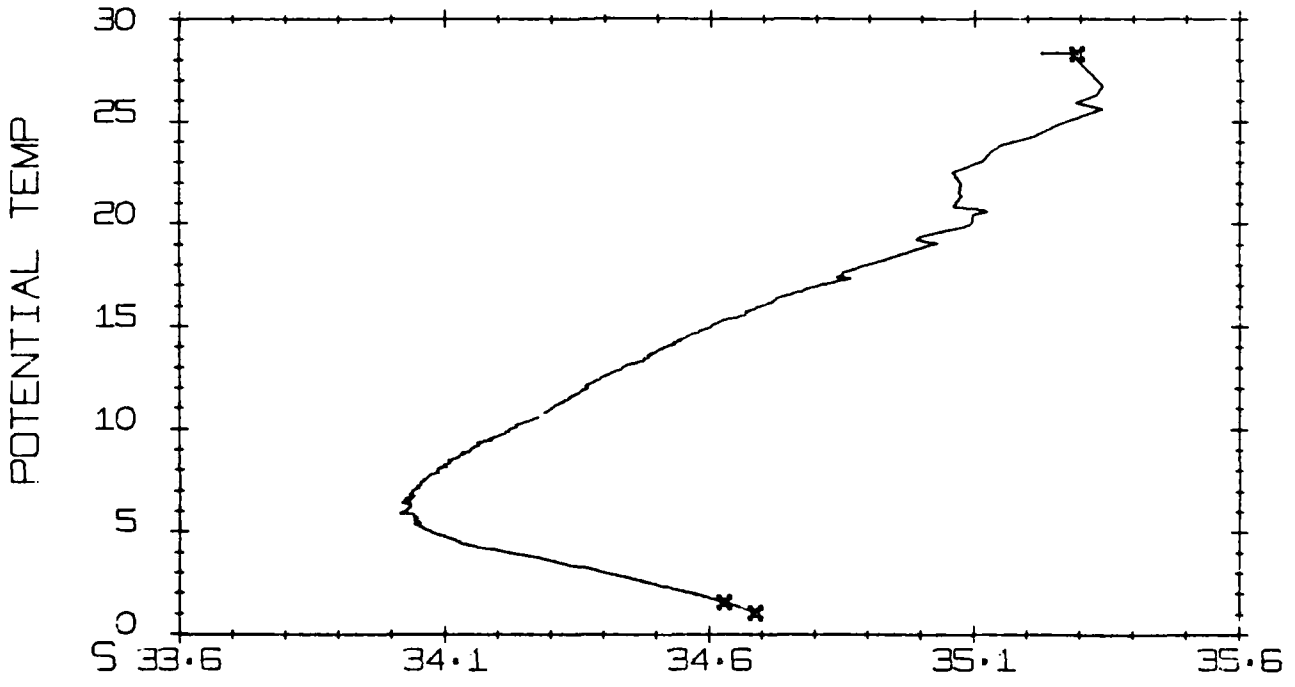
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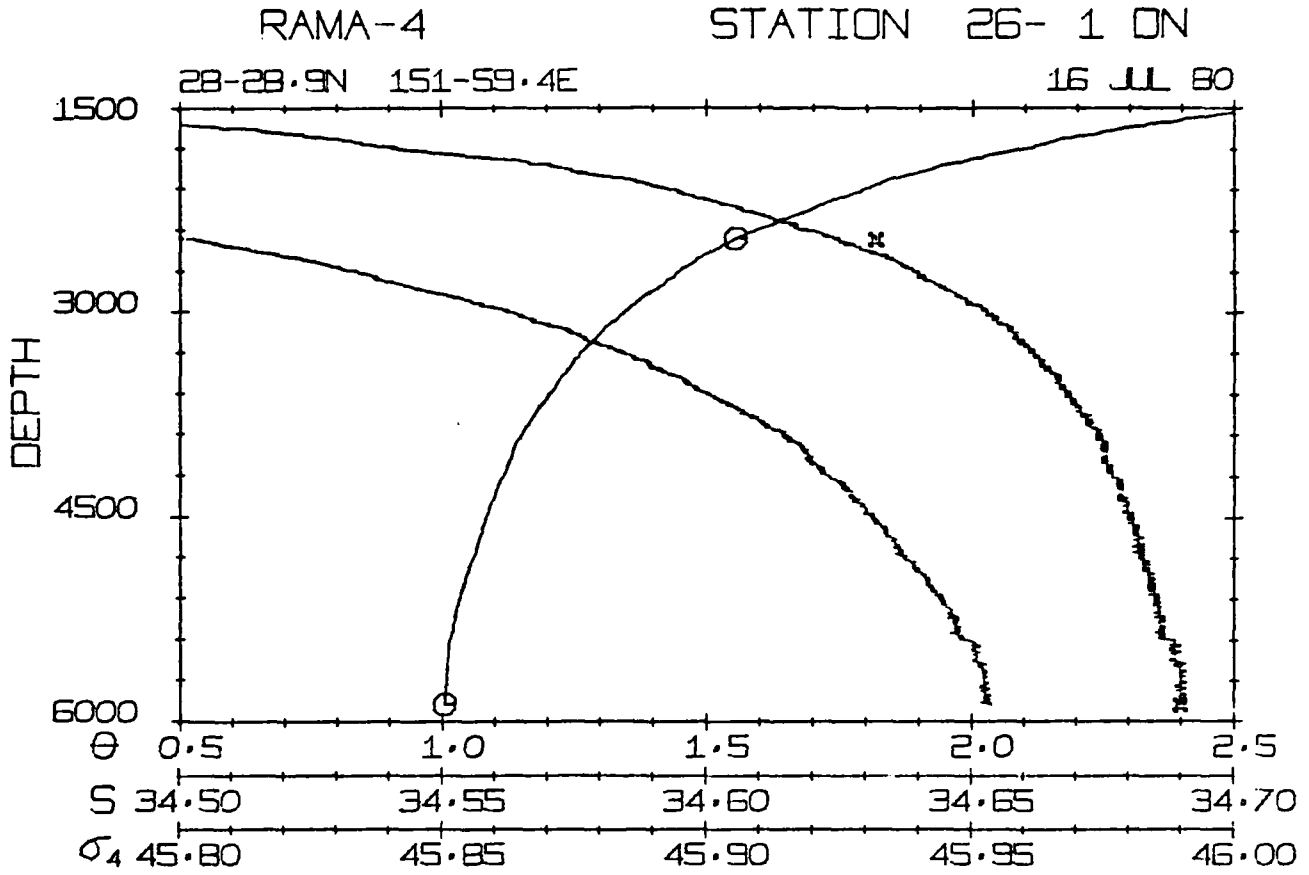
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STATION 26- 1 ON
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16 JUL 80
DEPTH
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3000
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6000
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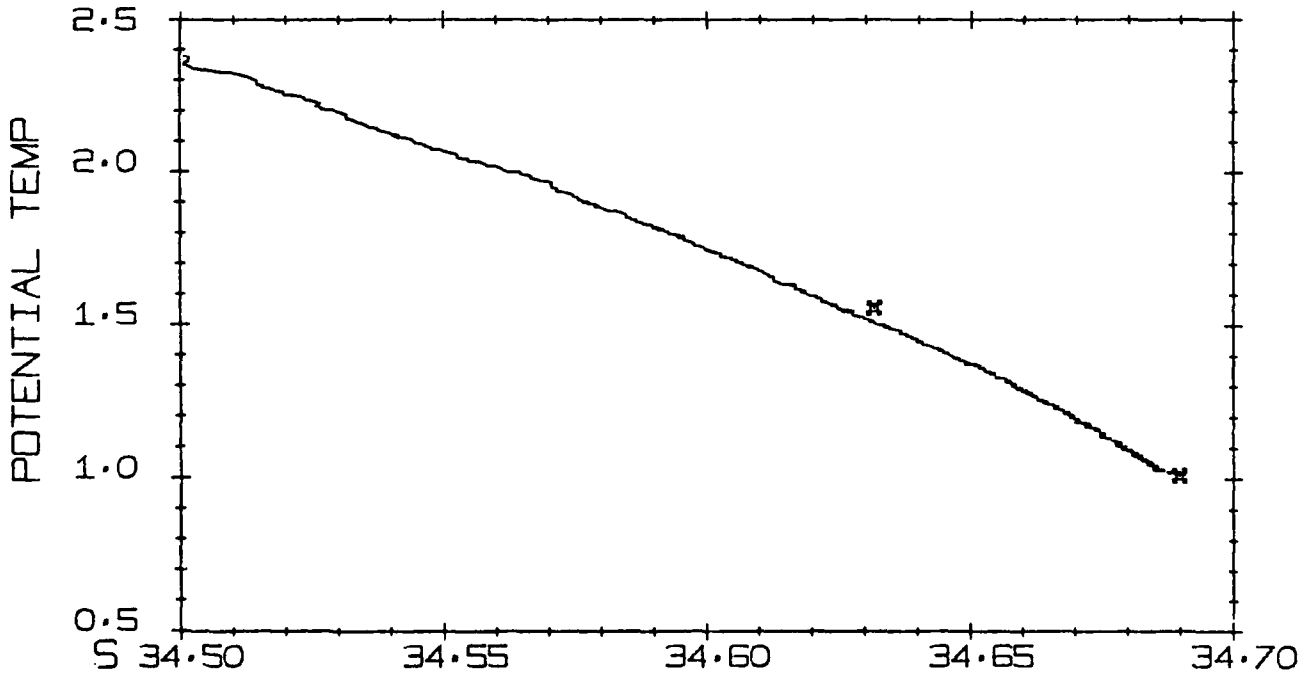
S 34.50 34.55 34.60 34.65 34.70
σ4 45.80 45.85 45.90 45.95 46.00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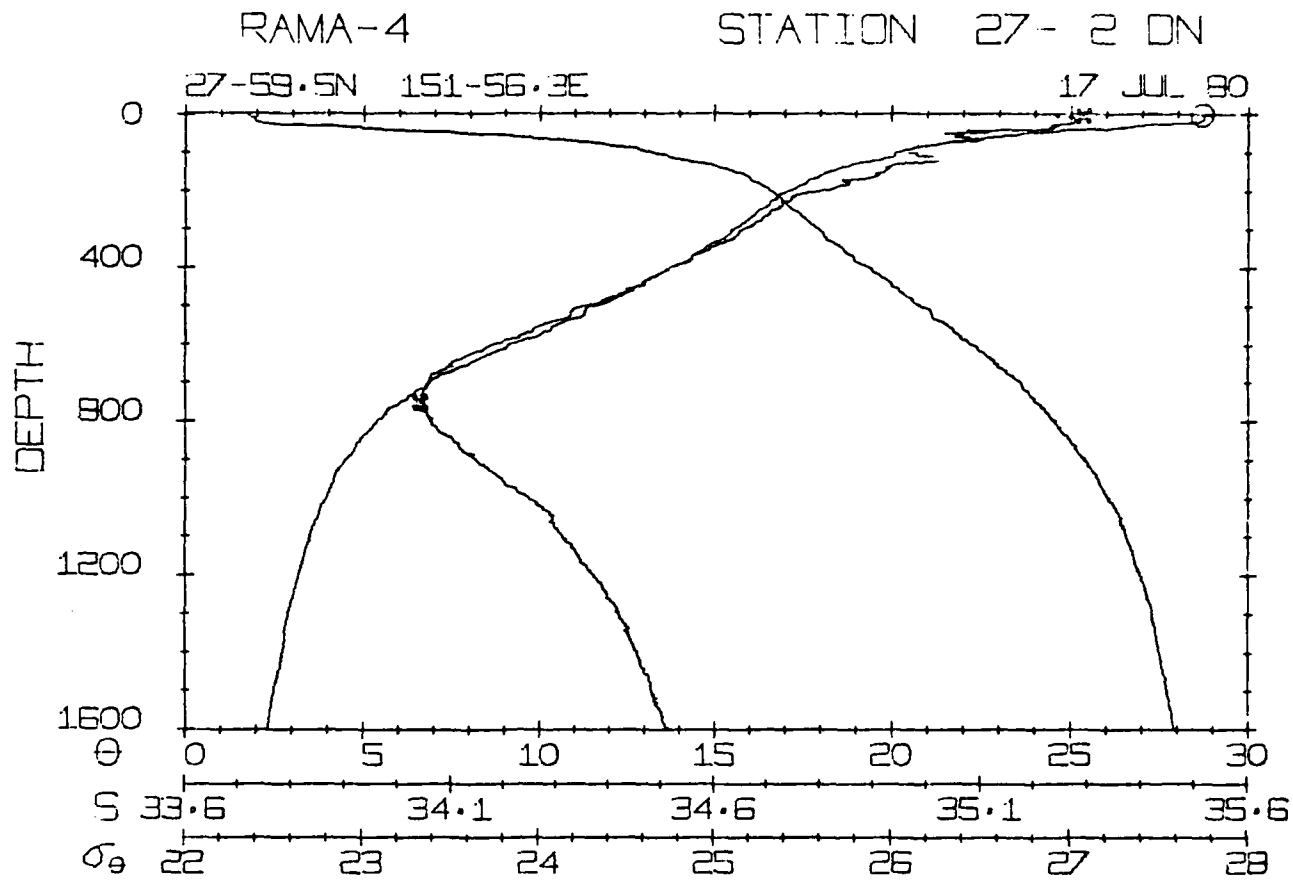
1.5
1.0
0.5
S 34.50 34.55 34.60 34.65 34.70


RAMA-4
STATION 27- 2 DN
27-59.5N 151-56.3E
17 JUL 80
DEPTH
0
400
800
1200
1600
Θ
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10
15
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σθ
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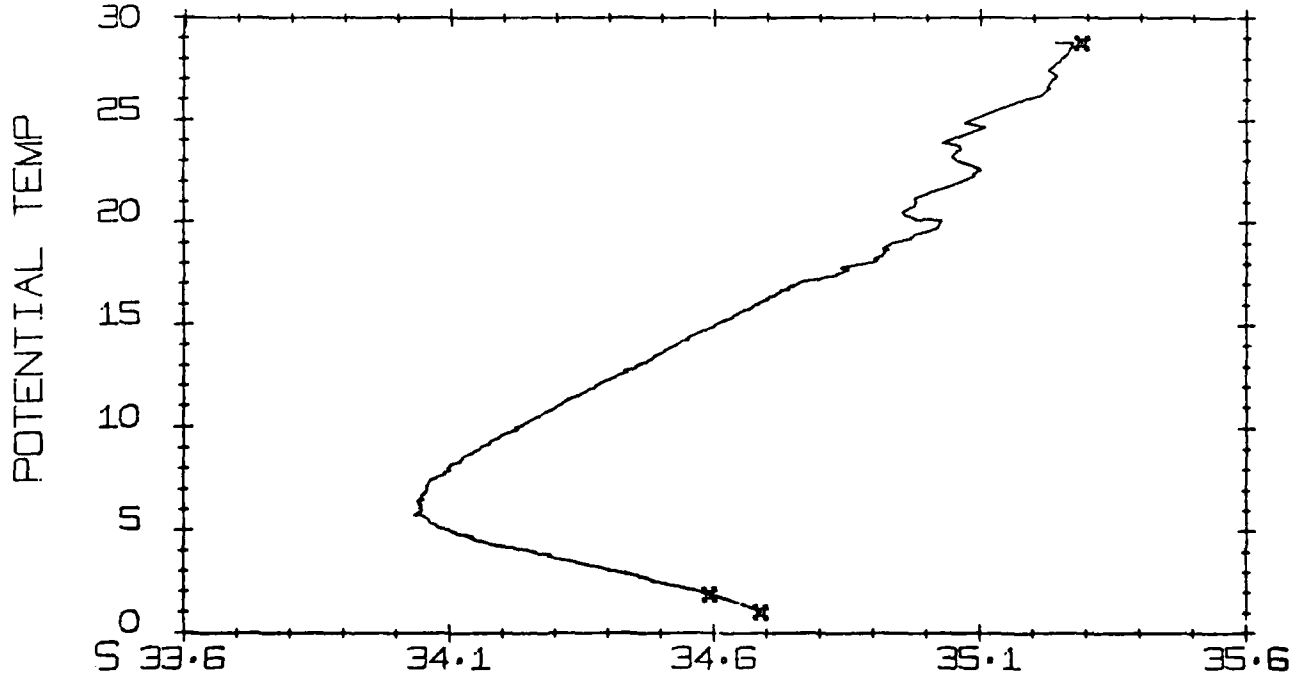
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34.1
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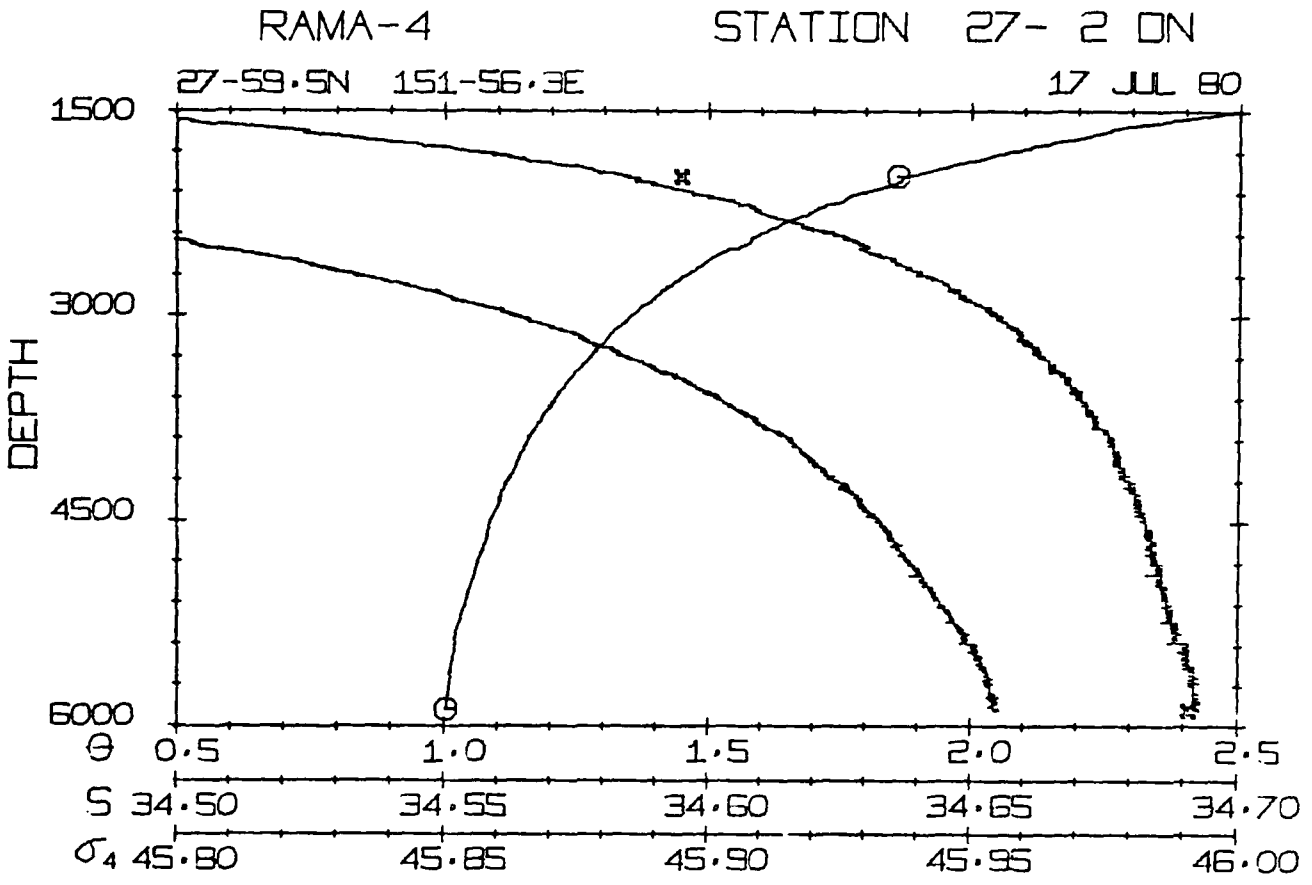
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17 JUL 80
DEPTH
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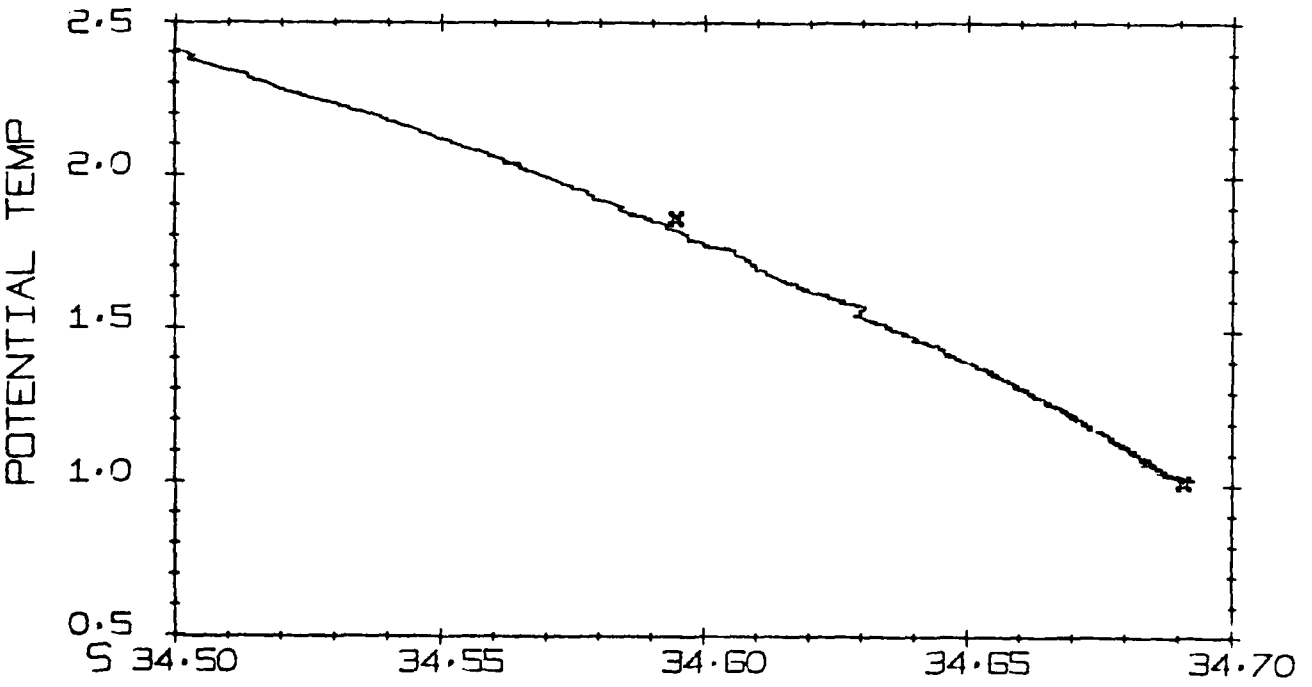
S 34.50 34.55 34.60 34.65 34.70
σ4 45.80 45.85 45.90 45.95 46.00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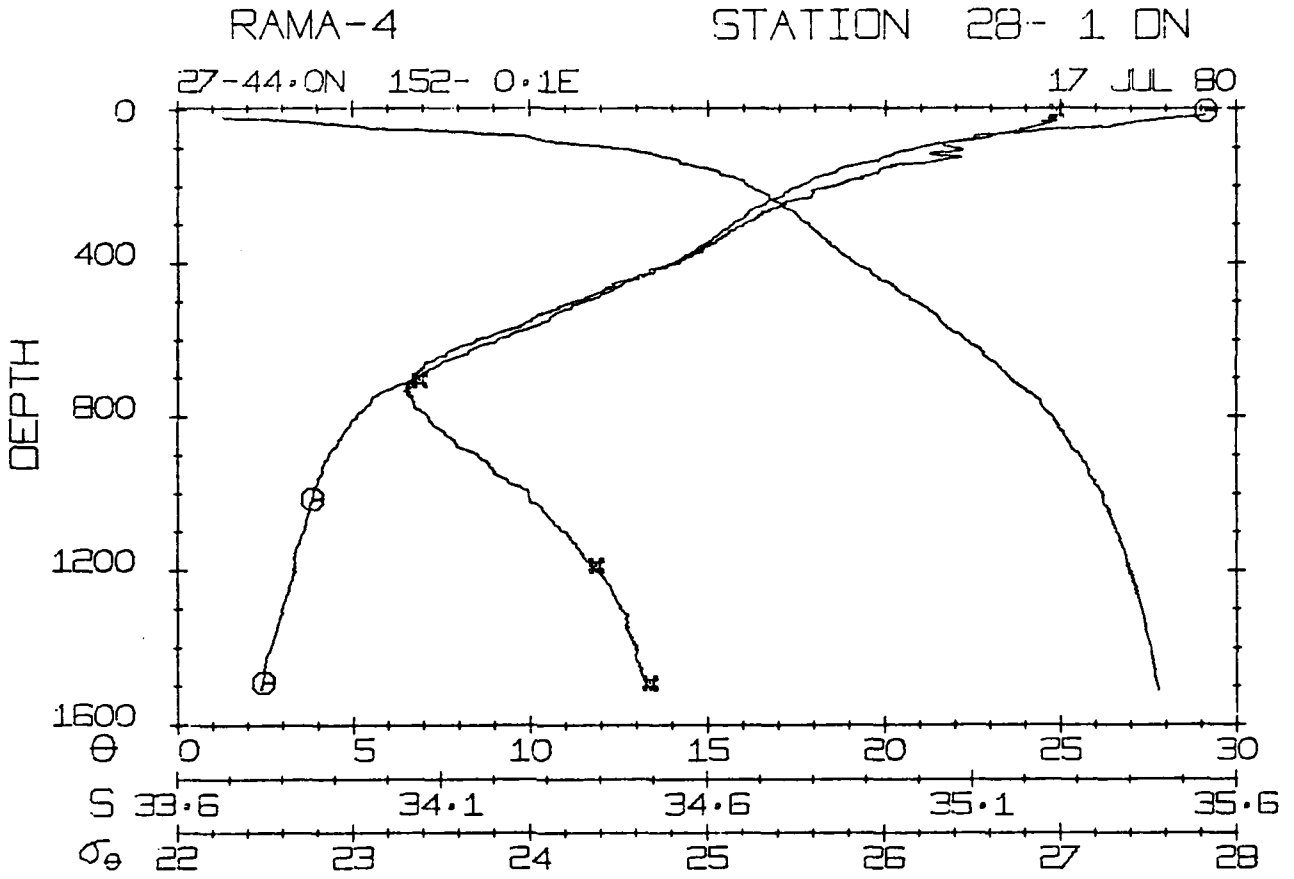
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1600
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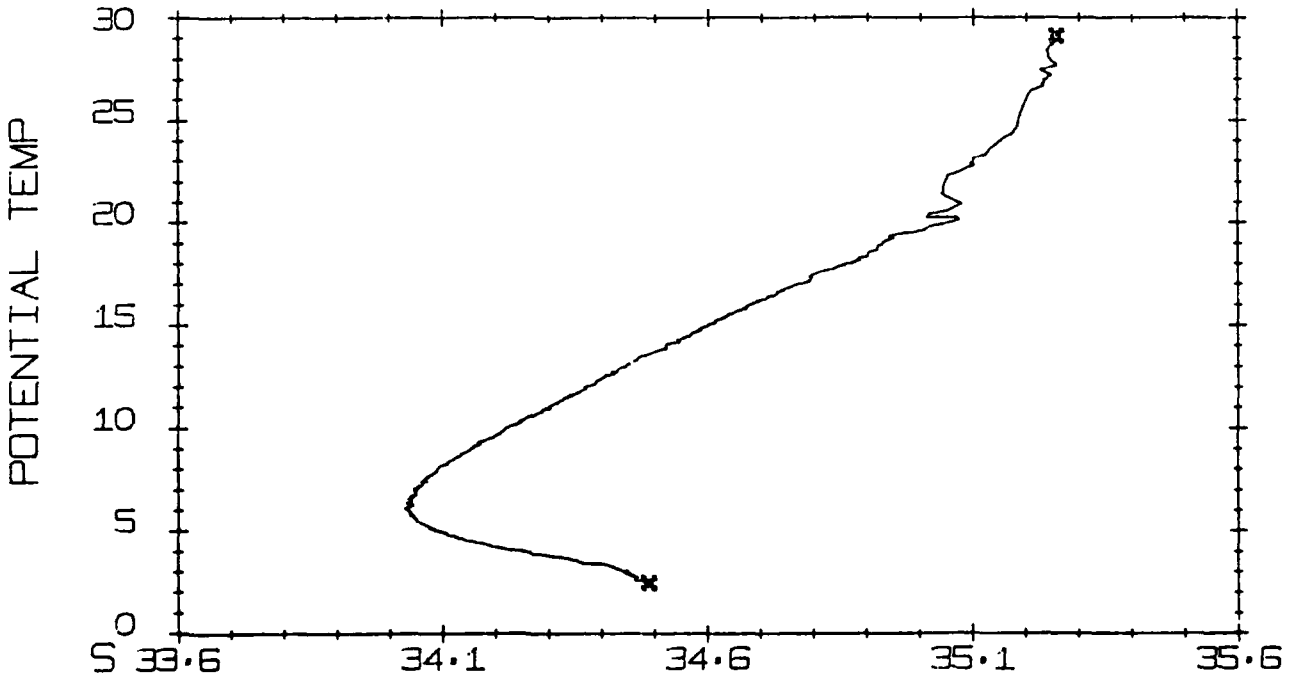
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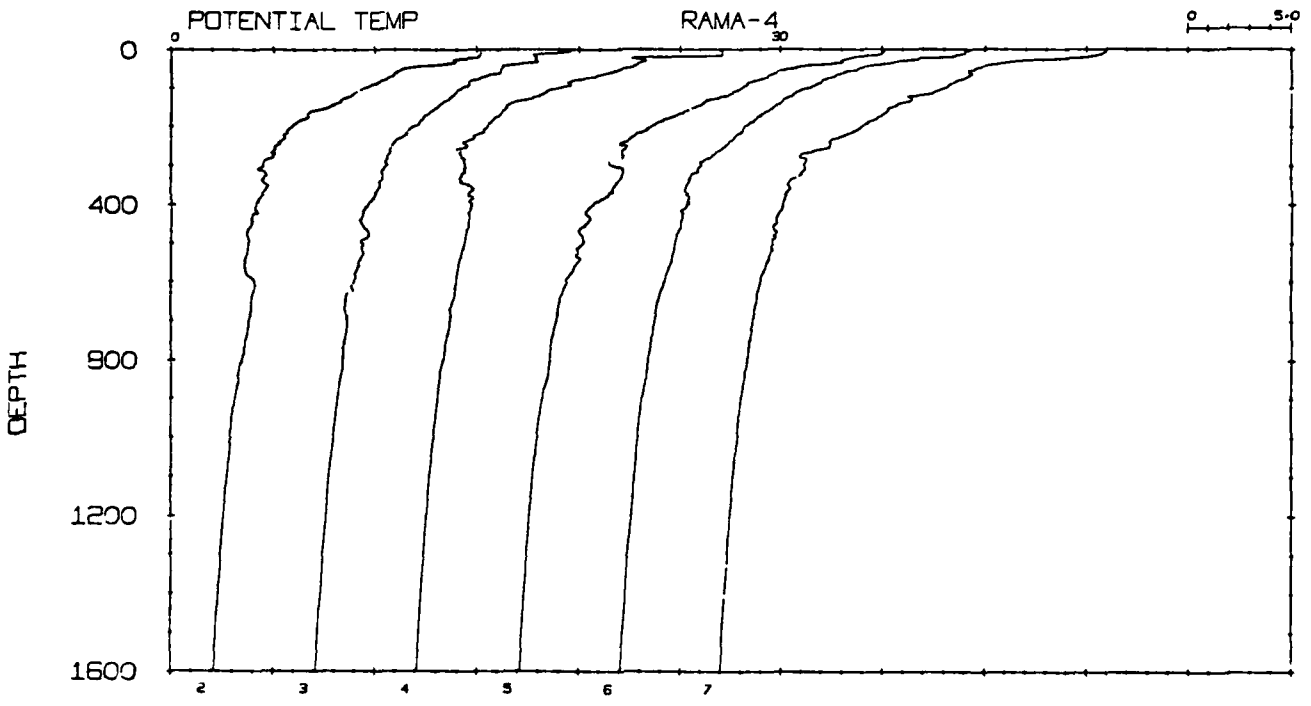
SEQUENTIAL

CTD PLOTS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DEPTH
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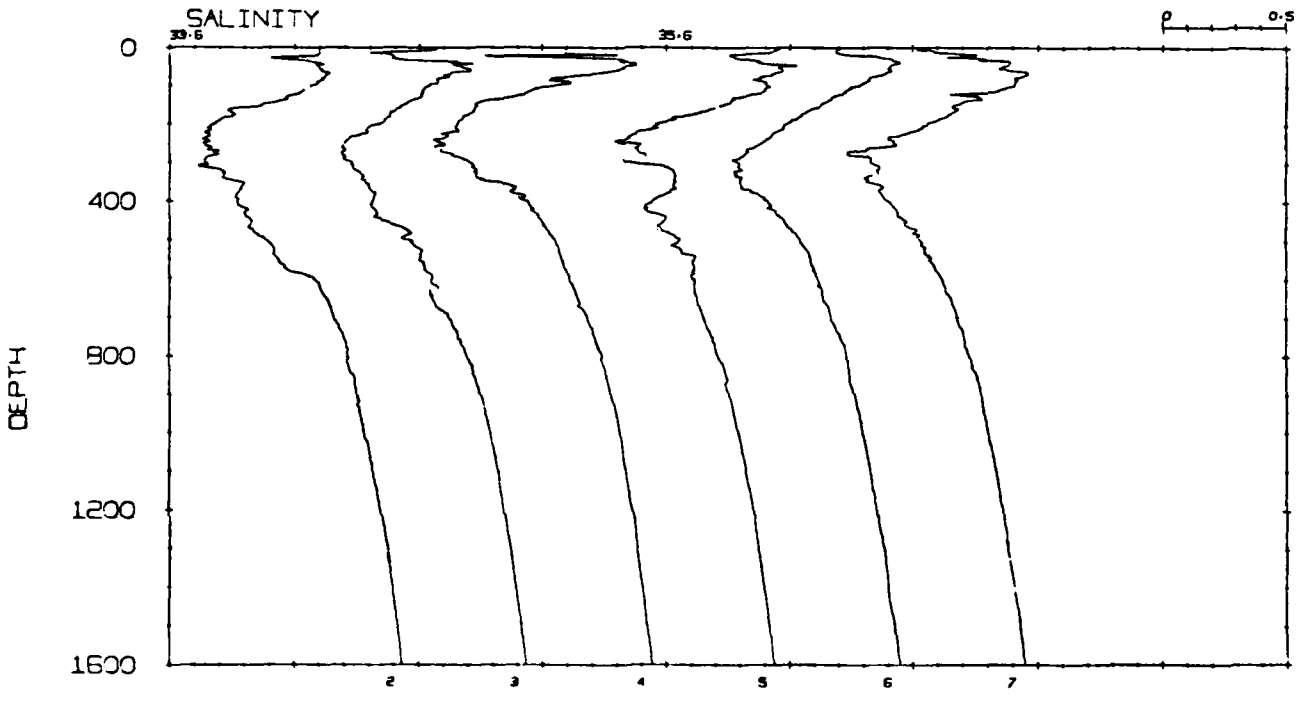
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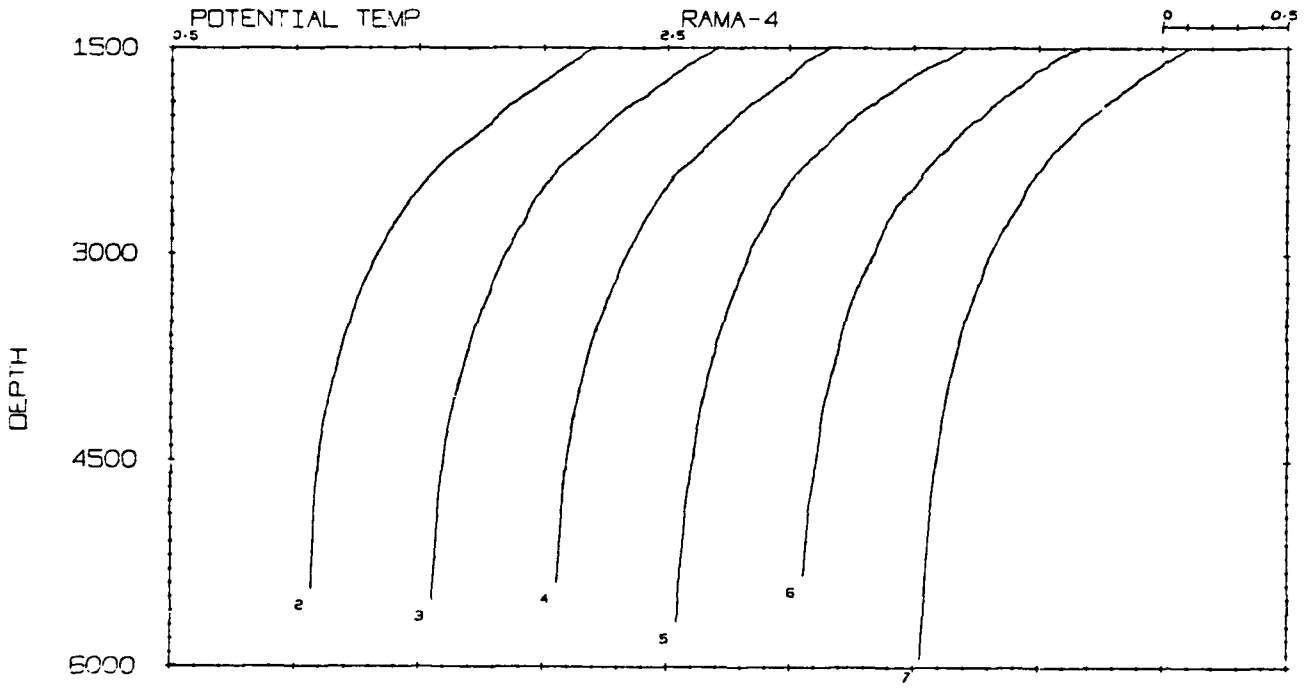
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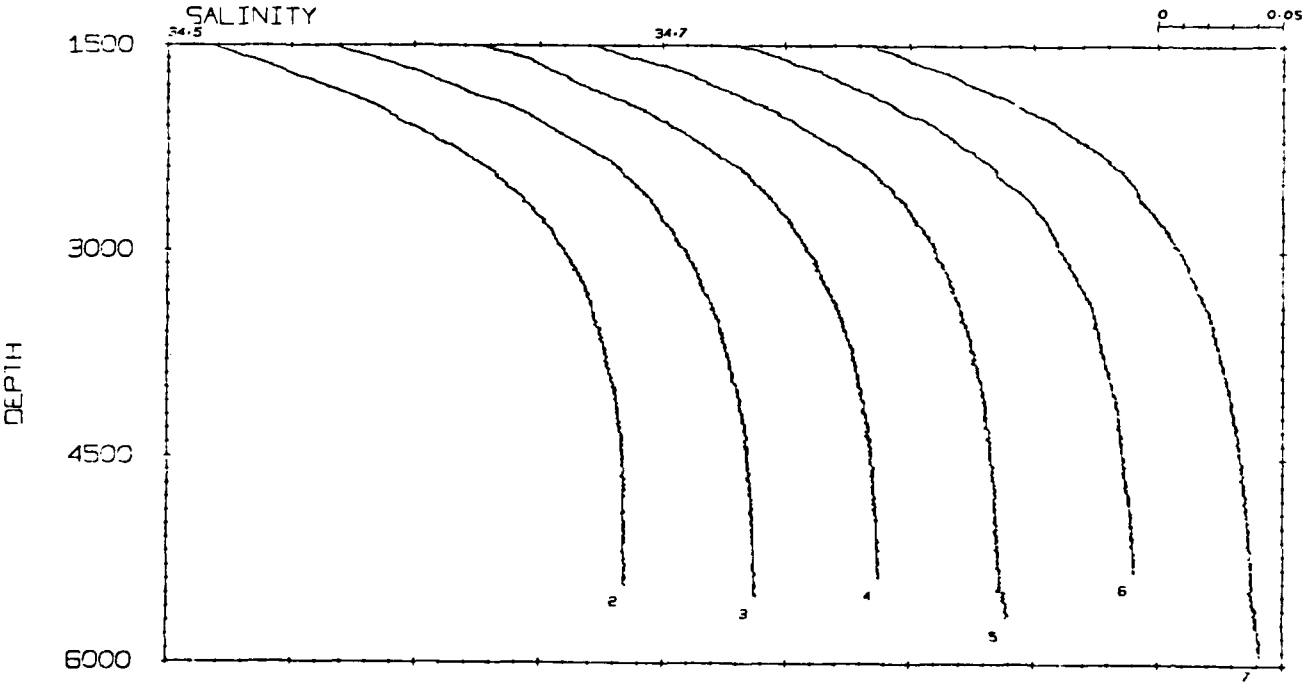
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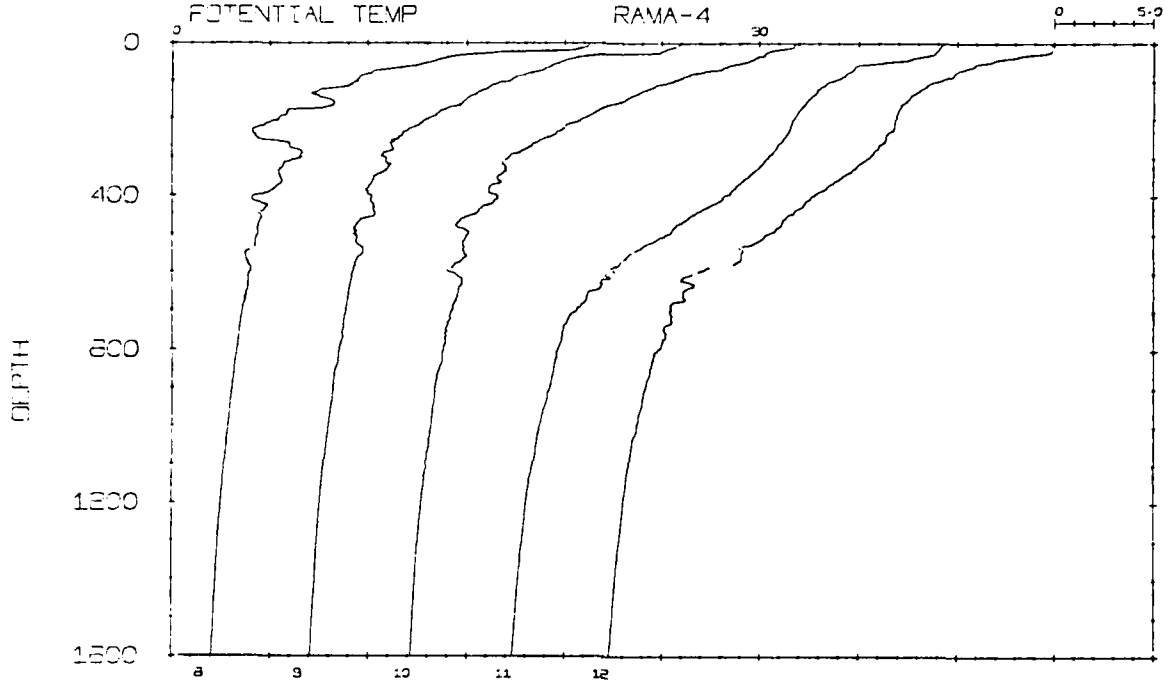
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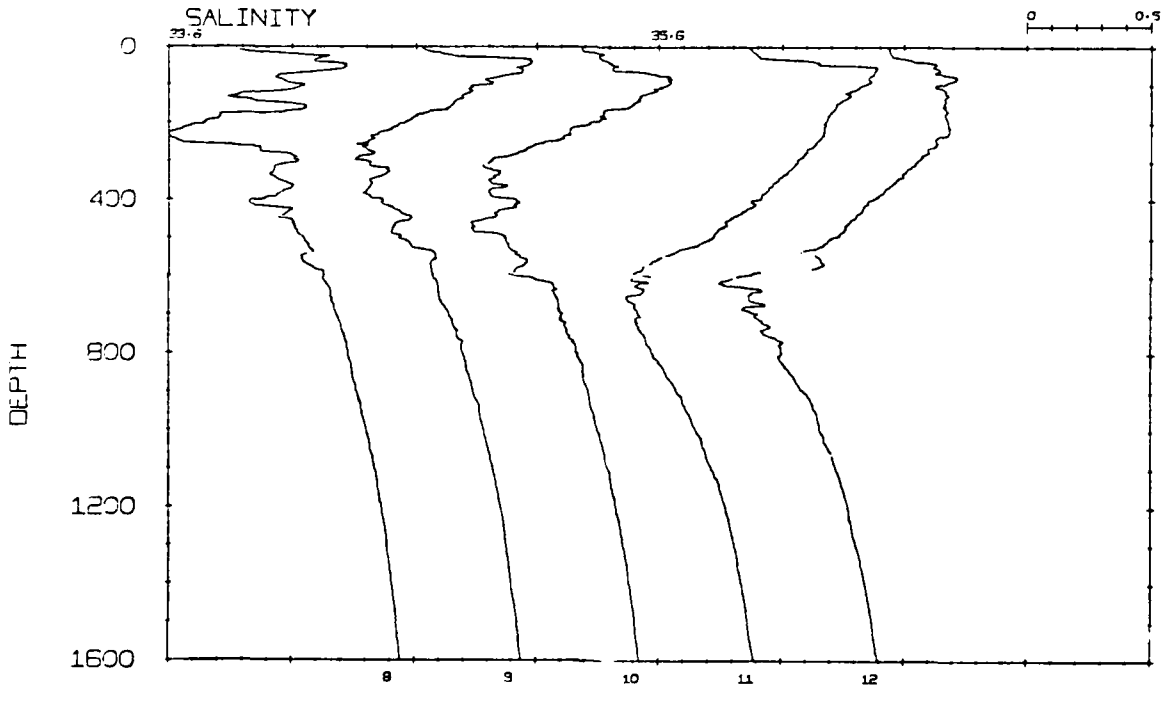
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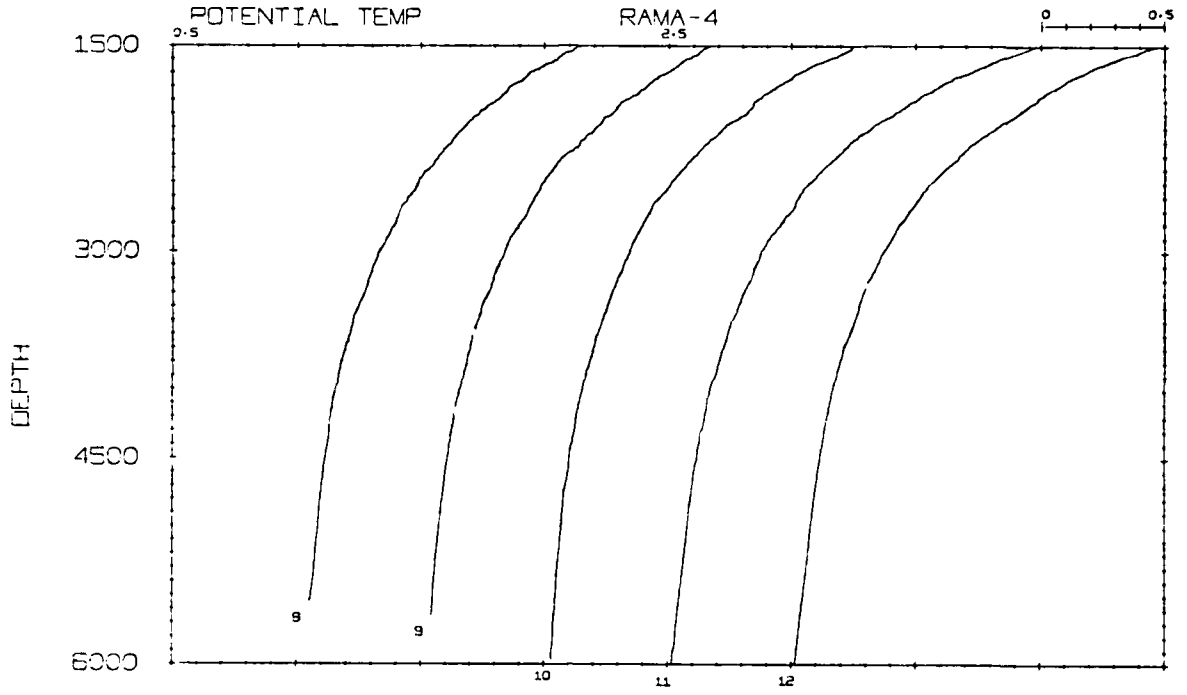
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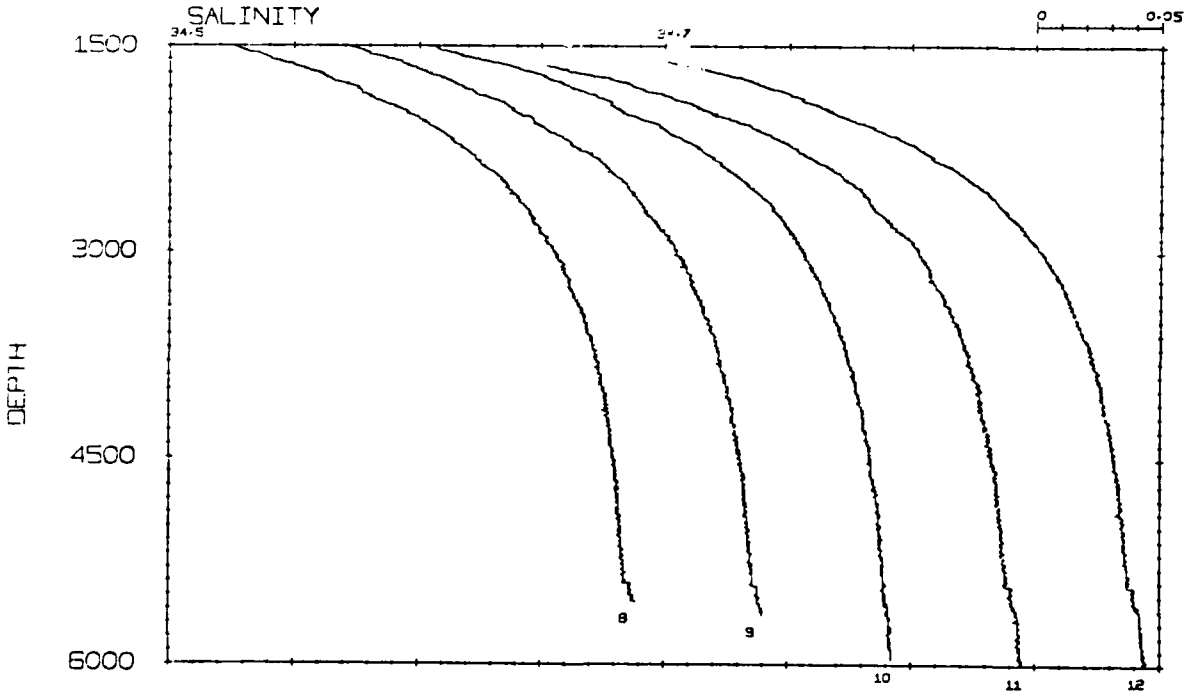
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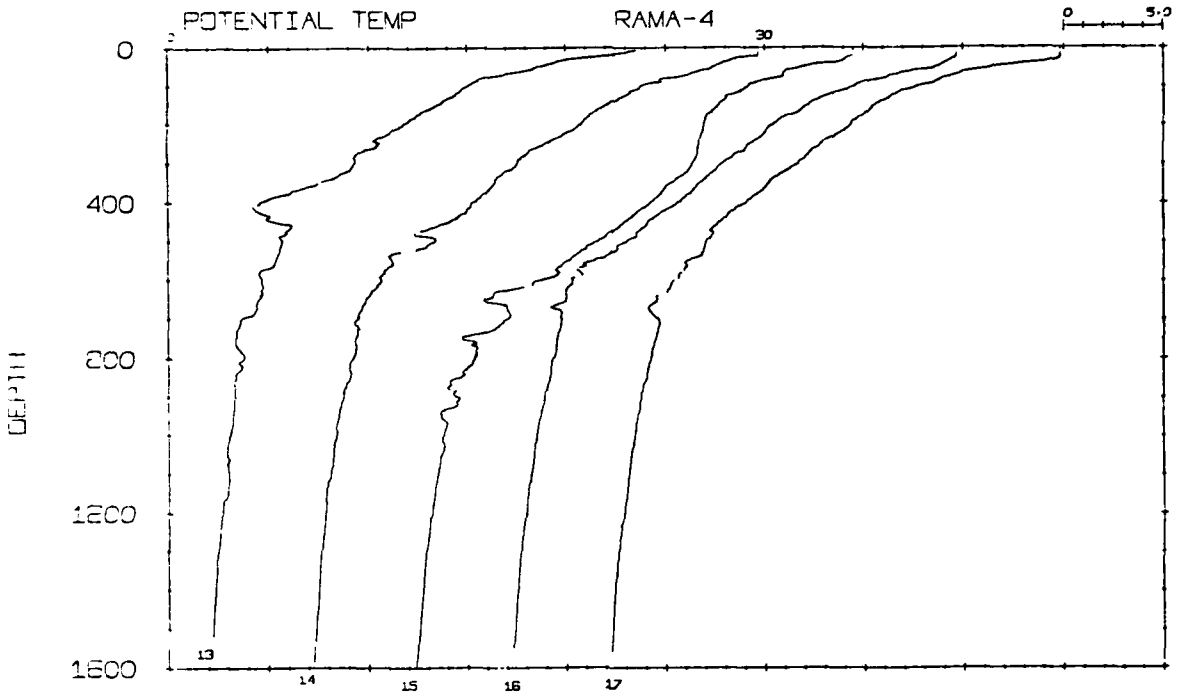
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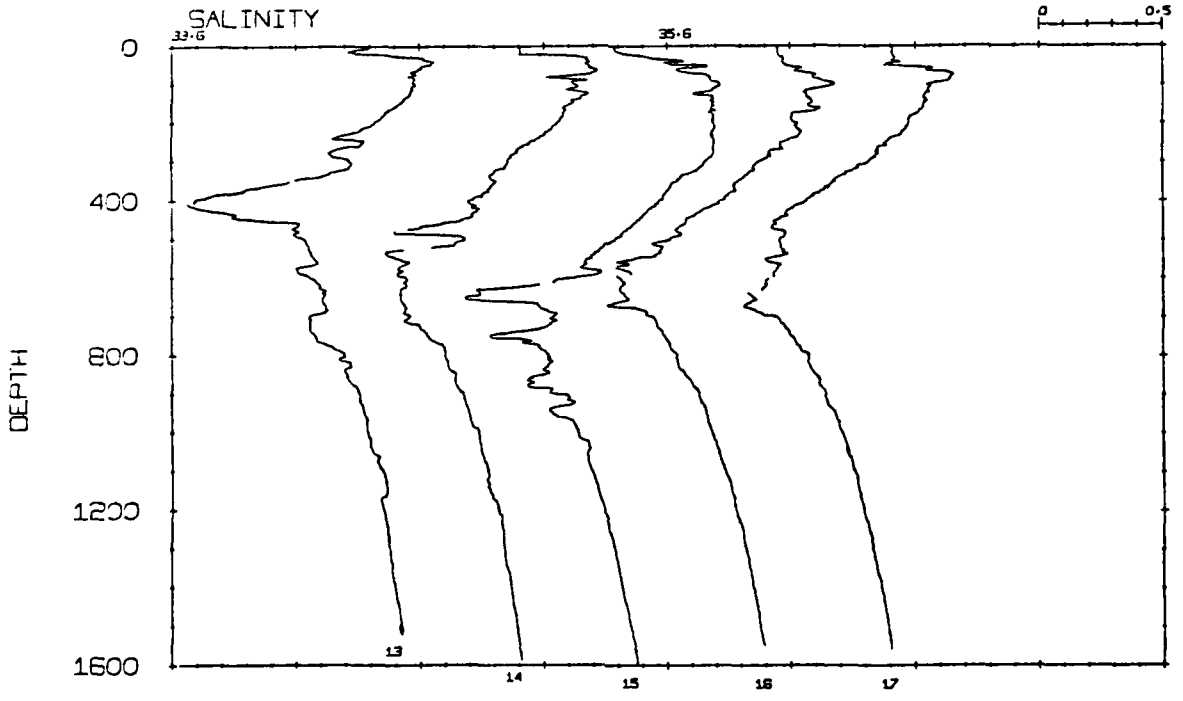
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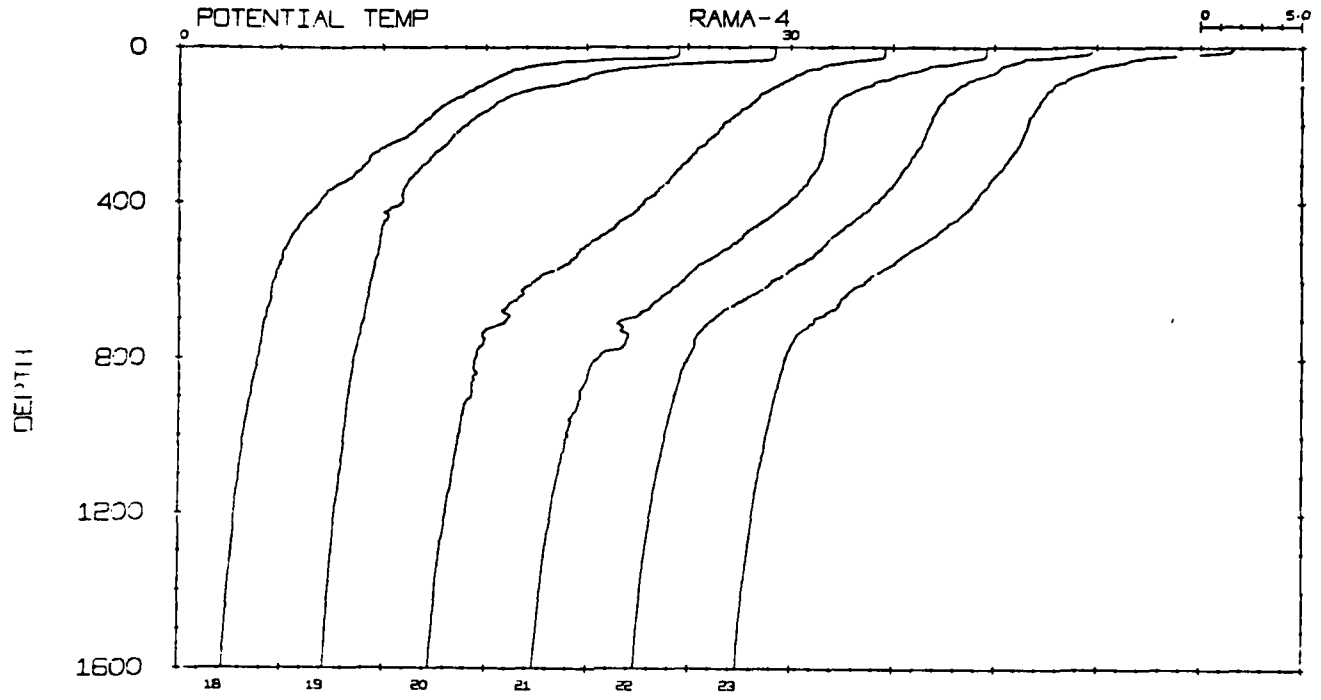
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RAMA-4
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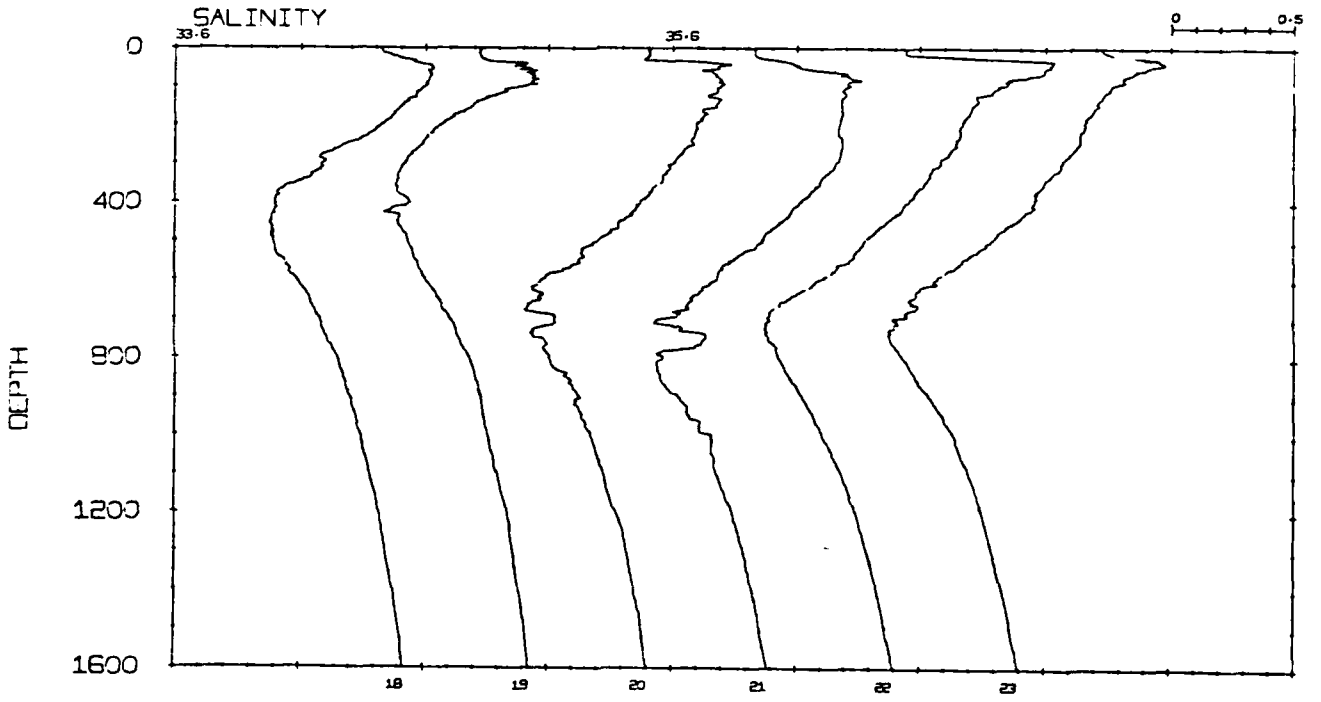
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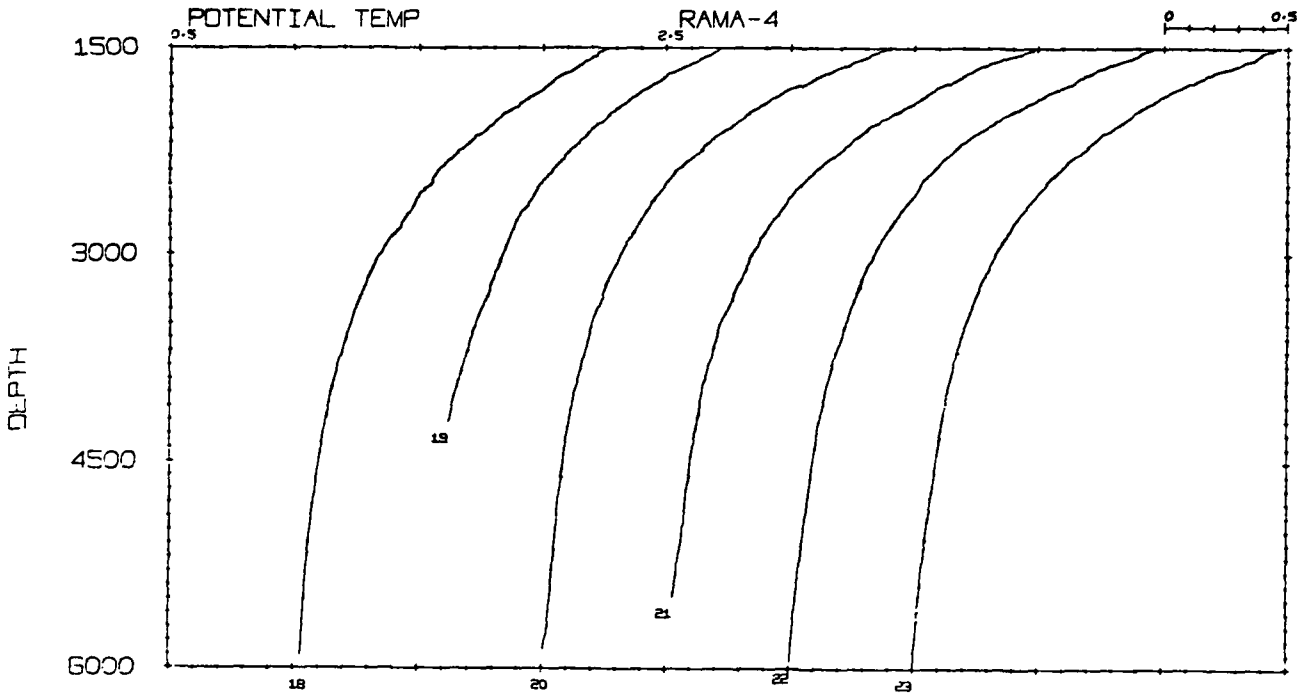
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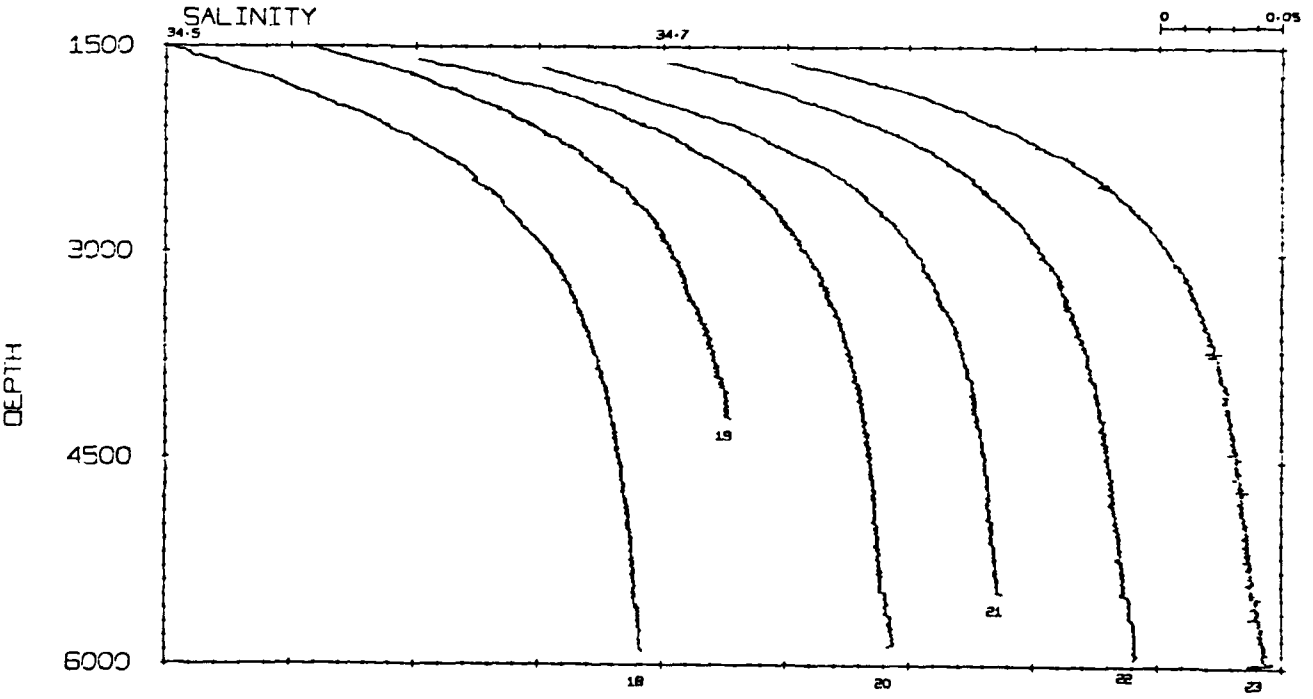
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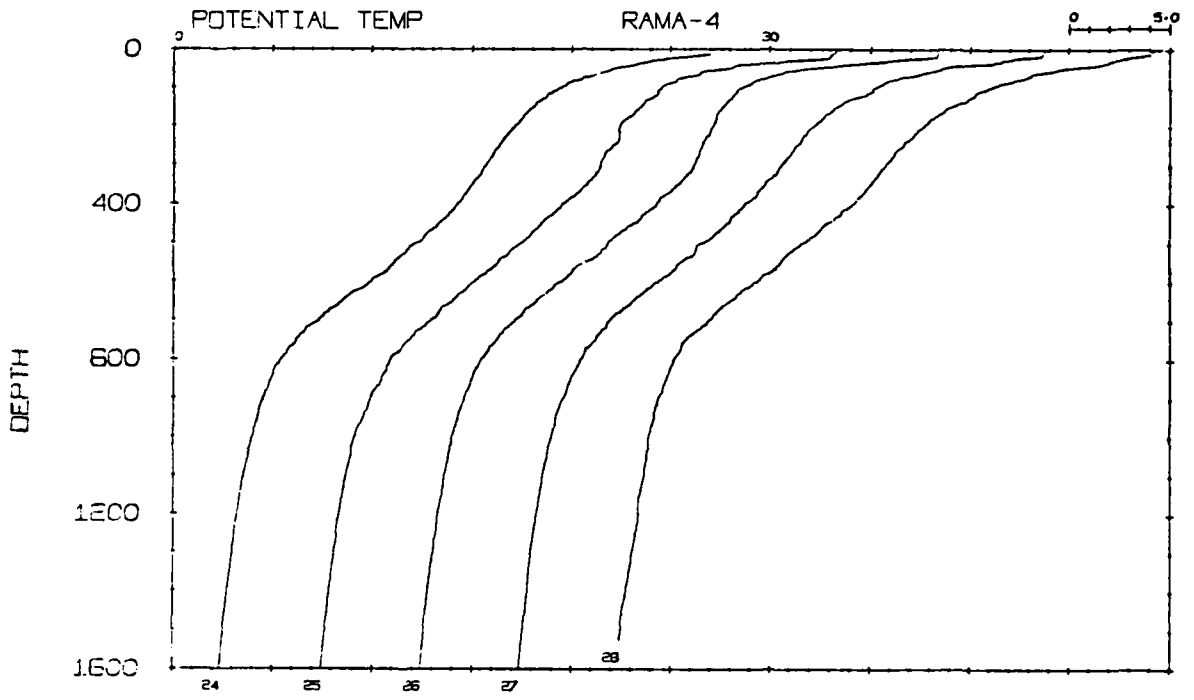
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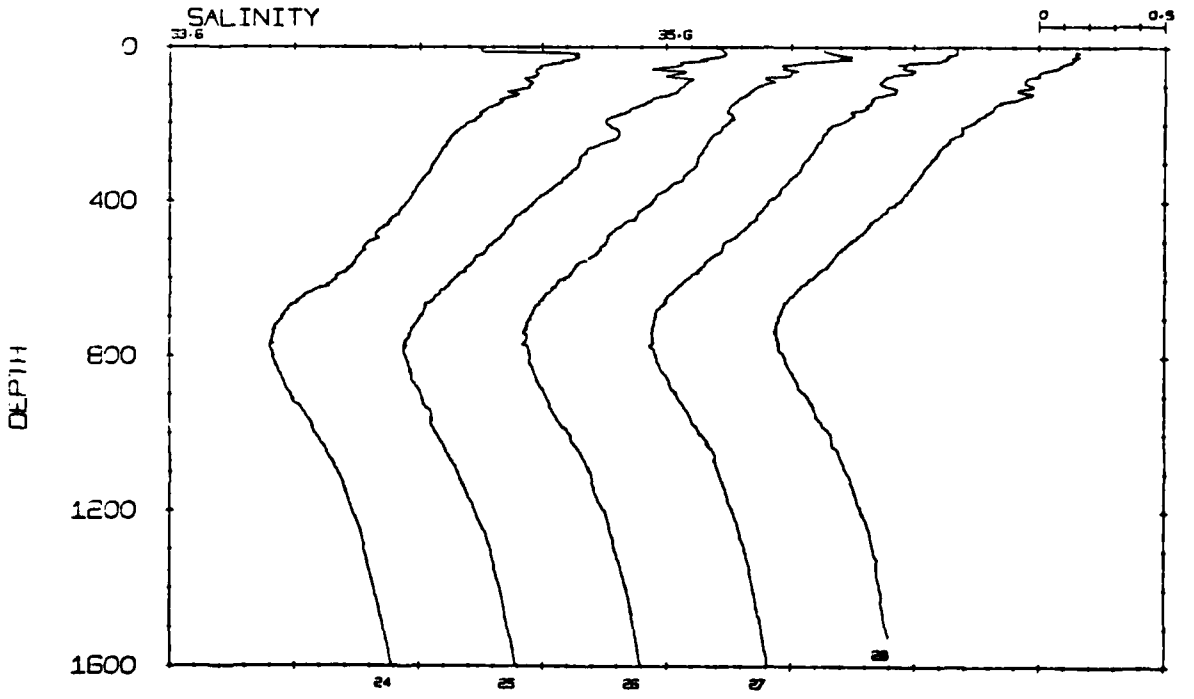
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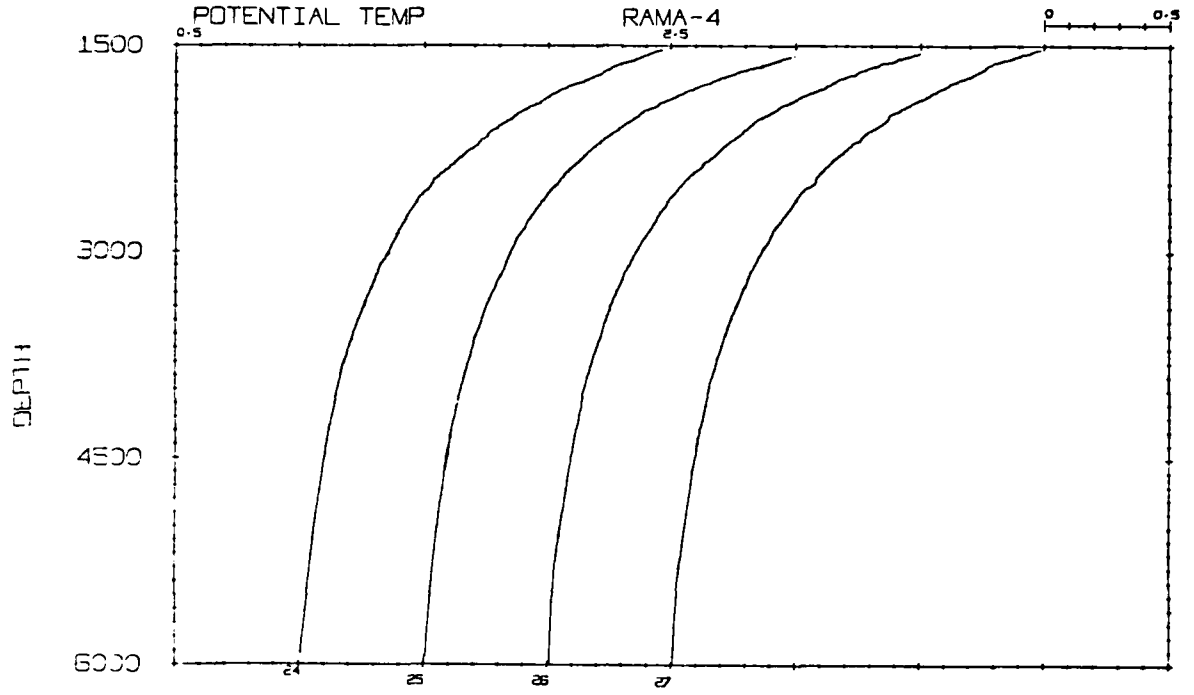
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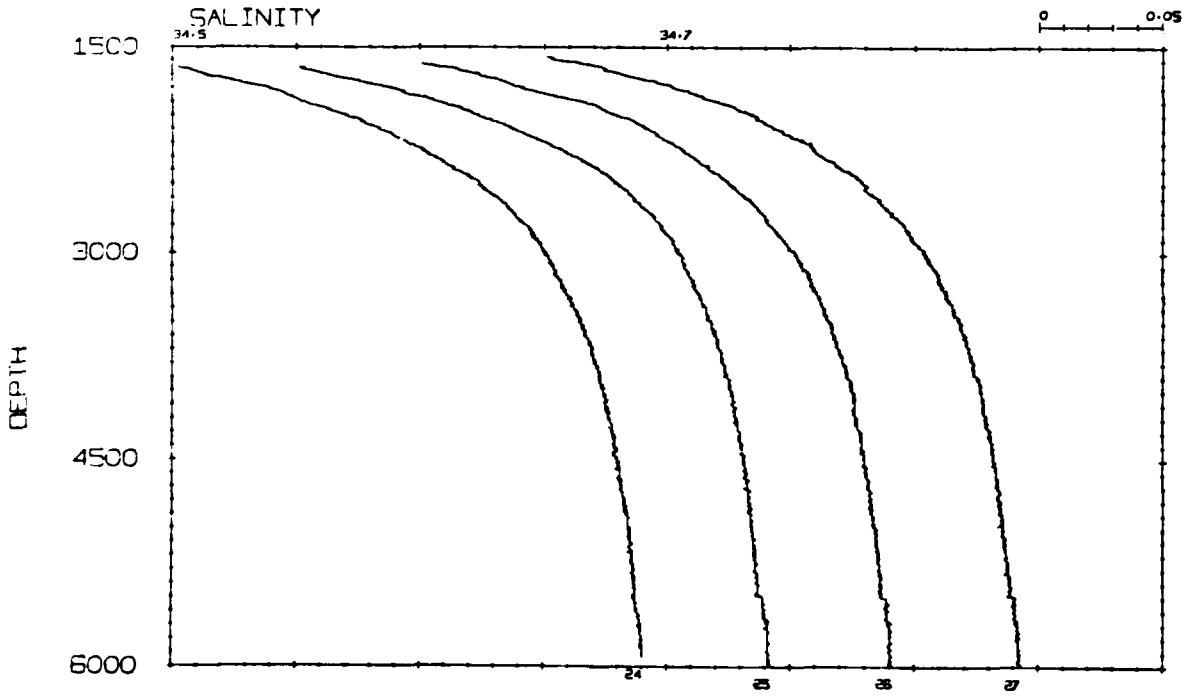
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DATE
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